

**VLADIMIR ALEXIEV**  
<https://vladimiralexiev.github.io/my/>



**Date of Birth:** 30 April 1968  
**Citizenship:** Bulgarian, Canadian  
**Last Updated:** Sep 2024

### Education

Institution [Date from - Date to ]	Degrees, Diplomas, Certificates obtained:
IBM Corporation, 7/2007	IBM Lotus Forms Certified Application Developer certification
Project Management Institute, 8/2003	Project Management Professional certification
Algonquin College, Ottawa, Ontario, 1-4/2003	Project Risk and Quality Management diploma
University of Alberta, Edmonton, 9/92-11/99	PhD in Computer Science degree
Technical University of Sofia, Bulgaria, 9/86-6/91	MS in Computer Science degree

**Language skills:** Competence on a scale of 1 to 5 (1=excellent; 5 =basic)

Language	Reading	Speaking	Writing	Evidence
Bulgarian	1	1	1	Mother tongue
English	1	1	1	Worked for 12 years in Canada
Russian	1	1	1	Studied 1-7 <sup>th</sup> grade in Russian language school

### International experience

Country	Date from - Date to
Bulgaria	1984-1991, 2003-present (7+17 years)
Belgium	2007, 2009, 2014, 2016, 2018 (4 months)
France	2019 (1 week)
United Kingdom	2017, 2019 (1 month)
Canada	1992-2002 (11 years); 2019 (2 weeks)
Romania	2007 (3 months)

### Membership in professional bodies:

- Project Management Professional; Project Management Institute
- Research proposal evaluator (Horizon Europe, Digital Europe, H2020, FP7, EuroStars, national programs)
- EU project monitoring expert (Digital Europe, H2020)
- Europeana Members Council and Data Quality Committee
- DBpedia Ontology and Quality committee
- Program Committee member or reviewer of numerous international conferences and journals

### Present position:

- Chief Data Architect, Ontotext Corp

### Years with the firm:

- Ontotext: 13 years, Sirma Group Holding: 31 years

### Key qualifications

- Co-founder of [Sirma Group Holding](#) (founded 1992), Bulgaria's largest software group (public as SKK on BSE since 2017, part of the SOFIX index), which has incubated over 15 companies in its lifetime.
- MS and PhD degree in Computer Science, Project Management Professional certification, 33 years of IT experience (26 years commercial experience), 15 years of PM experience, 13 years of semantic technologies experience.
- Semantic Web, RDF, RDFS, OWL2, SPARQL, SPIN, SHACL, ShEx, ETL, ontology engineering, RDF Shapes, application profiles, data mapping, semantic data integration, semantic applications
- Tender document drafting, ICT program/project evaluation, project budget/duration estimation, EU PRAG rules, PMBOK and TEMPO methodologies, IT PM university lecturer
- Enterprise Architecture, design of complex IT solutions, CASE tools, BPM/BPMS/BPMN/BPEL
- Data: analysis, modeling, design, conversion, migration; object-oriented analysis, UML (use case diagrams and use case realizations), RUP
- Practical experience in design, cost estimation, development, implementation and maintenance of large and complex IT systems in the public and private sector
- Web-based development; project management, configuration management; requirements and business analysis;

### Other Skills

- **Semantic technologies:** Ontology engineering, RDF, RDFS, OWL2, SKOS, SPARQL, GraphQL, SPIN, SHACL, ShEx, Linked Open Data, mapping, ETL, RDF Shapes, application profiles, data mapping, semantic data integration, semantic applications.

- **Cultural Heritage:** digitization, Europeana, Bulgariana (BG aggregator to Europeana), ResearchSpace. Ontologies and metadata standards: DC, CIDOC CRM, EDM, LIDO, VRA, CDWA, FRBR, FRBRoo, FRAD. Thesauri (VIAF, GeoNames, TGN, ULAN, AAT), thesaurus mapping.
- **Architecture:** Service Oriented Architecture, Enterprise Architecture, Archimate, Zachman Framework
- **Business Process Modeling,** BPMS (Websphere Process Server, jBPM, Intalio), BPMN, BPEL
- **Requirements:** business analysis, modeling, OO analysis (UML, Rational Rose, Software Architect), specification, use cases, requirements management (RequisitePro, DOORS), requirements-based project and test planning
- **Project management:** 12 years hands-on experience, largest project managed was 380 person/months, Project Management Body of Knowledge (PMBOK), PMP certification, using Projectvisiion, expert in Microsoft Project including Server/automation/integration, Function Points analysis, COCOMO, Delphi estimation
- **Software process:** full Software Development Life Cycle (SDLC), Software Engineering Body of Knowledge (SWEBOK), Capability Maturity Model (CMM), management of process application and improvement, configuration management, release planning, source control with (VSS, CVS, SVN, ClearCase), Rational Unified Process (RUP), Rational Rose Enterprise Suite, Extreme Programming (XP)
- **Quality assurance:** ISO 9001:2000 company certification, bug-tracking tools (Bugzilla, Jira, etc), evaluate automated test tools (Rational Visual Test, Web Analysis Stress Tool, WebLoad, Pure Coverage), test-driven development, FIT framework
- **Web technologies:** Java: J2EE, Blue-prints, servlets, JSP, JDBC, EJB. XML: XML, XSLT, XSL-FO (DocBook to PDF), XML Schema. Web Services: SOAP, UDDI, WSDL, WSFL, WSCI, Web application security methods
- **Languages:** Proficient with Perl, VBScript, Lisp. Experience with Java, JavaScript, Ruby, Python, C#, Prolog, C++, Actor, Smalltalk.
- **Data and databases:** Proficient with data analysis, modeling, schema development; Oracle RDBMS, PL/SQL, Microsoft SQL Server, TSQL, Informix IDS, Computer Associates Erwin, Oracle Designer 2000. Strong experience with data conversion, migration, ETL. Object/relational/XML mapping with Hibernate, JIBX, Dozer, generation.
- **Security:** Role-Based Access Control models, CAS server

## Professional Experience

12/2010-now	Graphwise.ai / Ontotext: <a href="mailto:Atanas.Kiryakov@ontotext.com">Atanas.Kiryakov@ontotext.com</a> , CEO	Chief Data Architect	<p>Ontotext (<a href="http://www.ontotext.com">www.ontotext.com</a>) is a world-class software developer of core Semantic Web technologies. It has 22 years of experience in semantic web applications, semantic repositories, text analysis, semantic annotation, web mining, etc. Roles:</p> <ul style="list-style-type: none"> <li>• Current: Chief Data Architect: setting company standards and practices in semantic modeling and data integration, Knowledge Graph building processes, work on commercial projects.</li> <li>• Current: lead Ontotext's efforts in industrial data domains, in particular Electricity, Energy, Transport and Logistics, Buildings/Infrastructure (AECO), and Data Spaces. See <a href="https://www.ontotext.com/solutions/industry/">https://www.ontotext.com/solutions/industry/</a> and <a href="https://www.ontotext.com/blog/data-wants-to-be-truly-sovereign-designing-data-spaces/">https://www.ontotext.com/blog/data-wants-to-be-truly-sovereign-designing-data-spaces/</a></li> <li>• Former: co-lead, Innovation and Consulting. Responsible for consulting engagements, semantic integration, R&amp;D projects including EC-funded (H2020)</li> <li>• Former: lead, Data and Ontology Management group</li> <li>• Former: improve company processes, internal communication, wiki and task tracker, website structure and content. Business development, tender and proposal writing</li> <li>• Former: vertical focus on semantic technologies for Cultural Heritage and Digital Humanities, i.e. the Galleries, Libraries, Archives and Museums (GLAM) sector</li> </ul>
12/2022-9/2023	International Data Spaces Association	Task force member	<p>Member of two task forces on Data Space Interoperability:</p> <ul style="list-style-type: none"> <li>• Semantic Interoperability (Vocabulary Hub) Task Force: Dec 2022 - Mar 2023</li> <li>• Energy Data Space Interoperability Task Force: May 2023 - Sep 2023</li> </ul>
5/2017-2020	Sirma Cognitive Consulting: <a href="mailto:david.taylor@sirma.com">david.taylor@sirma.com</a> , senior director	Consultant in Semantic Integration and Ontologies	<a href="#">Sirma Cognitive Consulting</a> comprises <a href="#">a number of experts</a> in semantic technologies, data integration, master data management and cognitive computing. Based in New York, this new entity gathers together people from various units of Sirma Group Holding to offer cognitive consulting to enterprises and institutions.
5/2009-9/2021	New Bulgarian University Petya Assenova, <a href="mailto:pasenova@nbu.bg">pasenova@nbu.bg</a> , head Department of Informatics; <a href="mailto:Stoyan.Mishev@nbu.bg">Stoyan.Mishev@nbu.bg</a> : program lead Data Science	Masters level lecturer: IT PM (2009-2019, joint with IMI BAS), semantic technologies (2019-2021)	<p>Teach in New Bulgarian University Masters programs:</p> <ul style="list-style-type: none"> <li>• IT Project Management (co-organized with Institute of Mathematics and Informatics, Bulgarian Academy of Sciences): core IT PM (MITM101 and MITM102), software estimation (MITM308 and MITM319). Resources: <a href="#">program</a> (2016), <a href="#">conference paper</a> (2010), <a href="#">presentation</a> (2010), <a href="#">student evaluation</a> (2013): 94% of all students rank my courses Highly</li> <li>• Data Science: <a href="#">DSCM031 Semantic Technologies</a> (with Nikola Tulechki, ONTO's training manager)</li> </ul>

2013-now	Served as reviewer in several international conferences and journals	Program Committee member or reviewer	<ul style="list-style-type: none"> <li>• Chair of Practical Experiences with CIDOC CRM and its Extensions (CRMEX 2013), co-located with Theory and Practice of Digital Libraries (TPDL 2013)</li> <li>• International Journal on Semantic Web and Information Systems, Special Issue on Dataset Profiling and Federated Search for Linked Data (IJSWIS-DP 2014)</li> <li>• International Semantic Web Conference (ISWC 2015) track on Data and Ontologies</li> <li>• International Keystone Conference (IKC 2016)</li> <li>• Multimodal Media Data Analytics (MMDA2016), in Conjunction with the 22nd European Conference on Artificial Intelligence (ECAI 2016)</li> <li>• Networked Knowledge Organization Systems (NKOS 2016, 2018)</li> <li>• Methods, Evaluation, Tools and Applications for the Creation and Consumption of Structured Data for the e-Society (Meta4eS 2016)</li> <li>• Data Sharing and Digital Humanities (DSDH 2017)</li> <li>• Ontologies, DataBases, and Applications of Semantics (ODBASE 2018)</li> <li>• Data Technologies and Applications, 2021</li> <li>• European Conference on Semantics Systems (SEMANTICS 2016, 2017, 2021, 2022)</li> <li>• Semantic Web Journal (SWJ) 2021</li> <li>• <a href="#">Workshop on Data Spaces &amp; Semantic Interoperability 2022</a>, organized by W3C and Trusts EU project</li> <li>• Application of Ontologies to materials and manufacturing (OntoCommons 2022): expert panel.</li> <li>• Knowledge Graph Construction workshop (KGCW 2022, 2023)</li> <li>• Extended Semantic Web Conference (ESWC 2023) industry track</li> <li>• Natural Language Processing for Knowledge Graph Construction (NLP4KGC) workshop at the Web Conference 2023.</li> </ul>
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10/2006-now	Most recently: <a href="mailto:EC-ROBOTICS-AND-AI-EVALUATIONS@ec.europa.eu">EC-ROBOTICS-AND-AI-EVALUATIONS@ec.europa.eu</a> , DG CNECT – Communications Networks, Content and Technology Unit A1 – Robotics & Artificial Intelligence Innovation and Excellence; and others	Proposal evaluator	Proposal evaluator for numerous EU and national research programmes: <ul style="list-style-type: none"> <li>• Horizon Europe CL4-2024-HUMAN-03-02 - Explainable and Robust AI</li> <li>• Horizon Europe INFRA-2024-EOSC-01-05 - Innovative and customizable services for EOSC Exchange (European Open Science Cloud)</li> <li>• Bulgarian Ministry of Science, BG-RRP-2.017 – Innovation in green and digital technologies</li> <li>• DG CNECT/2022/OP/0132: evaluated commercial proposals for the development of SIMPL: Smart Middleware Platform for Cloud-to-edge Federations and Data Spaces</li> <li>• Digital Europe 2022-CLOUD-AI-03-AI-ON-DEMAND: AI on Demand Platform</li> <li>• Horizon Europe CL4-2022-HUMAN-02-02 - European Network of AI Excellence Centres: Expanding the European AI lighthouse</li> <li>• Horizon Europe CL4-HUMAN-2021-01-01 - Verifiable robustness, energy efficiency and transparency for Trustworthy AI: Scientific excellence boosting industrial competitiveness</li> <li>• Horizon Europe CL4-HUMAN-2021-01-02 - European coordination, awareness, standardization &amp; adoption of trustworthy European AI, Data and Robotics</li> <li>• Enterprise Ireland Disruptive Technology Innovation Fund (DTIF2)</li> <li>• Eureka EuroStars: 2015, 2017, 2019, 2020</li> <li>• H2020 DT-MIGRATION-06-2018-2019 Addressing the challenge of migrant integration through ICT-enabled solutions</li> <li>• H2020 Open Disruptive Innovation: SME support action (Phase 1 and 2)</li> <li>• H2020 ICT-15-2019: Cloud Computing</li> <li>• H2020 ICT-06-2016: Cloud Computing</li> <li>• BELSPO: Belgian Research Action Through Interdisciplinary Networks (BRAIN-BE 2016)</li> <li>• Qatar National Research Foundation 12th cycle of the National Priorities Research Program</li> <li>• European Data Incubator cascade funding</li> <li>• FP7 Call 5 Objective 1.2 Internet of Services, Software and Virtualisation</li> <li>• FP7 Service Architectures</li> <li>• FP7 Platforms for the Future Internet,</li> <li>• FP7 Highly Innovative Service / Software Engineering</li> <li>• FP6 call 5: Software and Services</li> <li>• Finpiemonte: Converging Technologies, Piedmont Region, Italy</li> </ul>
3/2022-2/2023	<a href="mailto:EC-ROBOTICS-AND-AI-EVALUATIONS@ec.europa.eu">EC-ROBOTICS-AND-AI-EVALUATIONS@ec.europa.eu</a>	Project evaluator	Evaluated the progress of 3 research projects related to Digital Innovation Hubs, AI on Demand Platform, and Hybrid collective intelligence. Evaluated innovation needs and potential for the EU Innovation Radar. (Names not listed for confidentiality reasons)
1/2016-12/2017	Europeana. <a href="mailto:Antoine.Isaac@europeana.eu">Antoine.Isaac@europeana.eu</a> , scientific coordinator	Members Council and Data Quality Committee	As a councilor I helped Europeana set its strategy for future development, organize the annual general meeting. Active in the Europeana Data Quality committee, and previously participated in 5 Europeana Task forces, 2 of which on Semantic Enrichment.

9/2003-11/2010:	Sirma Solutions Corp: <a href="mailto:Tsvetan.Alexiev@sirma.bg">Tsvetan.Alexiev@sirma.bg</a> , CEO	Chief Technology Officer	Overall responsibility for the R&D activities of the largest company in Sirma Group. Duties included IT consulting, leading project managers, tracking projects, setting technological and project management standards, staff education and career development, R&D infrastructure projects. Developing and leading seminars and training courses in project management and software development, both internal and external.
6/1998-1/2003:	WorkLogic Corp; <a href="mailto:Yavor.Djonev@sirma.bg">Yavor.Djonev@sirma.bg</a> , managing director	Director of Research and Development	Overseen all product and custom project development of a web-based software development company. Successfully grew the R&D team from 4 to 15 staff in 2 years. Duties: business analysis, architecture, specification, database design, project management, configuration management, release planning, setting directions for future development, oversee customer support and quality assurance. Wrote about 20 bids in response to RFP requirements.
1992-now	Sirma Group Holding <a href="mailto:Tsvetan.Alexiev@sirma.bg">Tsvetan.Alexiev@sirma.bg</a> , CEO	Co-founder	Co-founded the largest Bulgarian software group. After 24 years of sustained growth and spinning off over 10 companies (including Ontotext), Sirma Group had a successful <a href="#">IPO in Sep 2105</a> . The current strategy includes focusing on Cognitive Computing, and Ontotext plays a central role in this initiative.
1986-1991	Technical University of Sofia, Microcontrollers Lab. Zdravko Karakehayov, <a href="mailto:zgk@computer.org">zgk@computer.org</a> , lab director	Developer (part-time)	Microcontroller applications: Intel 8051 simulator and debugger, training modules and interfacing with Stenokey specialized stenography keyboard. IGES import/export modules for the CAD system of the CAD/CAM Lab
1984-1986	Programa R&D Lab (Bulgarian Academy of Sciences)	Developer (part-time)	Business applications for the ICL DRX-20 mini-computer

### Project Experience

From-To	Company & Reference Person	Role	Description
2/2025-now	Statnett. Andreas Kimsas (project lead), Svein Olsen (semantic architect)	Project lead	The Common Information Model (IEC 61970, 61968, 62325) are semantic standards that capture a lot of data in the electrical enterprise. They form a complex ontology of 900 classes and 7000 properties. Writing semantic (SPARQL) queries to extract data is a common need in power system analytics; but many electrical engineers find it a difficult task. The <b>Talk2PowerSystem</b> project aims to automate this through creation of a KG Question & Answer dataset, trying ChatGPT and other (locally-deployable) LLMs, creation of special Tools to be used by the LLM (e.g. geospatial or timeseries querying), evaluation and fine-tuning or N-shot learning. Other tasks include BIM-CIM integration (from CIM to AECO substation design and back to CIM), creating research proposals, and collaborating with the electricity community. I wrote the project proposal, work on data analysis and KG building, create competency questions and specifications, and provide overall technical direction.
6/2024-10/2025	WorldBank for the Bulgarian Ministry of eGovernment. Ana Belver, WBG task leader.	Consultant	Part of a work group developing the Bulgarian National Data Governance Framework (NDGF), including topics like data quality, governance, FAIR data, DCAT, dataspace. The work involves creating and approving the NDGF, selecting high-priority dataspace for implementation, a Self-Assessment Toolkit, and training.

From-To	Company & Reference Person	Role	Description
10/2024-4/2025	StandICT grant	Standardization expert	<p>StandICT is a long-standing EU programme with the goal is to strengthen the European ICT Standardisation Ecosystem. I won a grant to work on “Industrial Data Ontology (IDO) and Industrial Ontology Foundry (IOF): Tooling and Ontology Contributions”. My ontology-related tools are used in the production of ISO 23726-3 IDO. There are many sector-specific ontologies, and IDO and IDF have the ambition to integrate and interplay with them, thus providing much needed inter-disciplinary semantic integration opportunities. Here are some that I have considerable experience with:</p> <ul style="list-style-type: none"> <li>• Asset Administration Shell (AAS) for Industry 4.0 and Industrial IoT</li> <li>• Web of Things (WoT) for easy IoT description and access</li> <li>• IEC Component Data Dictionary (CDD) and ECLASS for product classes and characteristics</li> <li>• GeoSPARQL for geospatial data</li> <li>• International Foundation Classes, Linked Building Data ontologies, DiCon, BricksSchema,</li> <li>• RealEstateCore for Buildings and Infrastructure</li> <li>• CityGML for smart city architecture, landscape and transportation</li> <li>• GS1 EPCIS, Digital Link and WebVoc for transport and logistics</li> <li>• W3C/UNCEFACT Traceability community group data models and ontologies</li> <li>• UN Transparency Protocol (UNTP) for verifiable claims on goods origin, quality, energy efficiency, climate impact, circularity, etc.</li> <li>• Digital Product Passports of consumer products, engineering products and buildings (called Digital Building Logbooks)</li> <li>• Data Spaces</li> </ul>
9-10/2024	ENTSO-E. Svein Olsen, Statnett semantic architect; Haris Vranaj, ENTSO-E project manager	Semantic consultant	Working with Svein Olsen (semantic architect at Statnett and convenor of the IEC CIM and CGMES standards), I consulted ENTSO-E on improving the semantic representation of these important electricity standards. This involves the ontologies, instance data, SHACL shapes, use of named graphs, etc. You can see my contributions at <a href="https://github.com/sveino/Inst4CIM-KG/">https://github.com/sveino/Inst4CIM-KG/</a>
5/2024	Siemens (Switchgear division). Neeti Ravi, project manager	Semantic consultant	Semantic consulting for a Siemens project on using ontologies and semantic data for a Configure, Price Quote (CPQ) project involving electrical Switchgear.
5/2024-now	Motor Oil (Hellas) Refineries (coordinator of EU research project). Underpin project site <a href="https://underpinproject.eu/">https://underpinproject.eu/</a> , CORDIS 101123179	Technical coordinator, semantic dataspace, semantic-timeseries integration	"Pan-European data space for holistic asset management in critical manufacturing industries" (UNDERPIN) is Ontotext's first Data Spaces research project, won in the Digital Europe call "Data space for manufacturing (deployment)". It focuses on energy: oil and gas (Motor Oil (Hellas) Refineries) and renewables (Motor Oil Renewable Energy wind farms). Ontotext's role is technical coordinator, providing managed semantic database, improving Dataspace metadata and data (semantic-based vocabulary services), integration of semantic description and timeseries sensor and engineering data, provision of query and inference services.
12/2023-2/2024	Timo Homburg, GeoSPARQL expert, i3mainz	Standards contributor	Provided numerous comments and fixes to the OGC GeoSPARQL 1.1 and 1.2 standards. Now contributing to the GeoSPARQL 1.3 version to include 3D geometry and BIM features. See my contributions in the <a href="https://github.com/engeospatial/ogc-geosparql">opengeospatial/ogc-geosparql</a> github project.

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1/2023-now	Graphwise.ai: <a href="mailto:atanas.kiryakov@graphwise.ai">atanas.kiryakov@graphwise.ai</a> , President	Innovation researcher	The Talk To Your Graph (TTYG) innovation group at Graphwise explores neurosymbolic solutions involving KGs and LLMs for Natural Language Question answering (NLQ). I participate actively in the group by researching novel approaches and evaluation frameworks, keeping a Zotero bibliography, experimenting with different target query languages (e.g. SPARQL vs GraphQL), contributing real-world use cases and datasets, aligning project-specific efforts (e.g. as in Statnett's Talk2PowerSystem project) with product features.
10/2022-12/2023	Ontotext Corp: <a href="mailto:Atanas.Kiryakov@ontotext.com">Atanas.Kiryakov@ontotext.com</a> , CEO	Semantic modeling, LLM experiments	The Ontotext Knowledge Graph is a central source of information on Ontotext projects, clients, marketing materials, events, event participations, etc. It's also a testbed for experiments with vector indexing of KG entities and Natural Language Querying of KGs through the use of ChatGPT and other Large Language Models (LLM).
1/2023-8/2023	Mila Mutaftchieva, product owner, Ontotext	Semantic modeling	The Company Events (Risk Event Detection) demonstrator uses KG and Large Language Models (LLM) technologies to show semantic extraction of events from news text, semantic integration of various company datasets (Crunchbase, PeopleDataLabs, Wikidata, stock tickers), and tracking the effect of events on stock prices.
5-7/2023	Bilyana Velikova, Digital Acceleration Lead, Information and Technology Solutions Operations and Corporate (ITSOC) department, The World Bank Group	KG consultant	Ontotext consulted the WBG and developed a comprehensive report "Using Knowledge Graphs and Machine Learning for Knowledge Management Advancement at the World Bank Group" (171 pages). The main topics of interest covered KG building, using KG to improve various aspects of Knowledge Management at WBG, and the use of Large Language Models (LLM) for natural language interaction with documents and KG entities, and advanced analytics to help answer complex economic and project management questions.
2/2023	EC DIGIT WG on MLDCAT-AP	Semantic consultant	MLDCAT-AP defines a DCAT profile to describe ML models, datasets, tasks, etc. It is based on earlier OpenML ontologies and a UML model, and is being defined with the SEMIC community of EC DIGIT. I contributed a number of suggestions in the Github repository <a href="#">MLDCAT-AP</a> . The most important is <a href="#">SEMICeu/MLDCAT-AP#15</a> : can OML describe ML over <b>semantic datasets</b> ? I also related this work to a schema.org task <a href="#">schemaorg/schemaorg#3140 add an ML Model type to schema.org</a>
2/2023	W3C Notation 3 (N3) Community Group	Semantic consultant	Notation3 and N3 Logic are extensions of RDF turtle that enables the representation of rules, builtins and reasoning in RDF. I contributed a number of improvement suggestions to the N3 spec, see Github project <a href="#">w3c/N3</a>
5/2022-5/2023	Pierre-Antoine Champin, Data strategist, W3C. <a href="mailto:pierre-antoine@w3.org">pierre-antoine@w3.org</a>	Working Group Expert	Initiated and participated in a community working group to standardize the use of YAML for Linked Data (YAML-LD), see <a href="#">json-ld/yaml-ld</a> . Participate in the RDF-star working group on behalf of Ontotext, see <a href="#">wg/rdf-star/participants</a> .



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12/2022-9/2023	International Data Spaces Association	Task force member	<p>Data Spaces is a huge EU initiative towards sharing of commercial data, while providing guarantees of appropriate access, usage, and preserving the sovereignty over data. All EU efforts in digitization, AI and data analytics center around this concept. I served as member of two task forces on Data Space Interoperability:</p> <ul style="list-style-type: none"> <li>Semantic Interoperability (Vocabulary Hub) Task Force: Dec 2022 - Mar 2023. I have developed the concept of Semantization of Data Spaces: that if not only the metadata, but also the business data of data spaces is represented in semantic form, this can bring significant benefits. I have presented this idea in a paper, blog, presentations and podcast. The IDSA Vocabulary Hub TF worked on raising the role of Vocabulary Services within IDSA RAM 4.0, and the possibility of using Linked Data principles in IDSA 5.0, and worked on a Data Space Interoperability whitepaper.</li> <li>Energy Interoperability Task Force: May 2023 - Sep 2023. This work is especially relevant to the 4 ongoing EC projects to develop the EU Energy Data Space .</li> </ul>
2/2023	Caden: <a href="mailto:Satyajeet.Raje@caden.io">Satyajeet.Raje@caden.io</a> , senior architect/ontologist	Semantic consultant	Caden collects and integrates personal data (in full compliance with privacy regulations) and helps its users monetize the value of their data. My role is consulting on schema.org reuse, ontology structuring, data representation and Semantic Object (SOML and GraphQL) models.
3/2022-now	Chubb: <a href="mailto:Aurelije.Zovko@chubb.com">Aurelije.Zovko@chubb.com</a> KG owner, <a href="mailto:Stephane.Fellah@chubb.com">Stephane.Fellah@chubb.com</a> senior ontologist	KG consultant	Chubb is a global provider of insurance products that operates in 55 countries and territories. It has embarked on a massive KG building effort using Ontotext products, to create 360-degree views of its business and provide a better foundation for its Machine Learning efforts. I consult Chubb on ontology engineering, data structuring, KG building using transformations generated from declarative models, and creation of Semantic Object (SOML and GraphQL) models.
10/2022-9-2025	enrichMyData project. <a href="mailto:Dumitru.Roman@sintef.no">Dumitru.Roman@sintef.no</a> , coordinator. Project site: <a href="https://enrichmydata.eu/">https://enrichmydata.eu/</a> , CORDIS project <a href="https://cordis.europa.eu/project/id/101070284">101070284</a>	InnoGraph AI researcher and semantic data analyst	<p>enRichMyData is a EU HE research project that develops a novel paradigm for building data enrichment pipelines, including key operations such as discovery, understanding, selection, cleaning, transformation and integration of Big Data from a variety of sources. The project will validate its solutions through business cases in various domains, including digital marketing, public procurement, innovation ecosystems, Industry 4.0 predictive maintenance of medical devices, and mineral processing.</p> <p>My main involvement is in the development of InnoGraph, a holistic KG of innovation in AI covering topics, research publications, software, developer discussions, ML models, datasets, people, organizations, patents, news etc; and its application in strategic consulting, gap analysis, innovation tracking and policy making.</p> <p>I am also involved in creating a Bosch Resistance Welding KG for predictive analytics of welding operations</p>

From-To	Company & Reference Person	Role	Description
9/2022-8/2025	ACCORD project, <a href="mailto:Rita.Lavikka@vtt.fi">Rita.Lavikka@vtt.fi</a> , coordinator. Project site: <a href="https://accordproject.eu/">https://accordproject.eu/</a> CORDIS project <a href="https://cordis.europa.eu/project/id/101056973">101056973</a>	Semantic and Ontology expert	ACCORD is an EU HE research project that will develop and integrate technical solutions for automating compliance checking of buildings in their design, construction and renovation/demolition life cycle phases. It digitalizes permitting and compliance processes using Natural Language Processing (NLP) over regulatory text, Building Information Modeling (BIM) data in IFC, CityGML and urban planning data, BSDD data dictionaries, etc. Ontotext will work on the semantic representation of regulations and an open format for machine readable rules, a building compliance ontology, rule elaboration tool and a GraphDB Connector for efficient querying of binary architectural/engineering data. We will contribute to the development of micro-services and compliance checking components. I initiated the project through the Linked Building Data community group; manage Ontotext's participation; participate in the Technical Board; worked on "Semantic BSDD": improving the structure of BSDD RDF, JSON and GraphQL; and will lead work on rule elaboration and implementation.
2019-2023	<a href="mailto:Nikola.Tulechki@ontotext.com">Nikola.Tulechki@ontotext.com</a> , senior semantic consultant	KG tools development	Conceived and developed pragmatic and highly productive tools for Knowledge Graph building. Developed a set of open source tools at <a href="https://github.com/VladimirAlexiev/rdf2rml">https://github.com/VladimirAlexiev/rdf2rml</a> : "rdfpuml" for generating diagrams, from semantic models in turtle "rdf2rml" for generating R2RML for semantization of relational data and ONTOP virtualization, "rdf2sparql" for semantization of tabular data with OntoRefine or TARQL. These have been proven in numerous commercial projects. Also contributed to business requirements for OntoRefine, an adaptation of OpenRefine for data semantization.
1/2022-12/2022	EU Publications Office (OPOCE), eProcurement Ontology (ePO) WG	Ontology consultant	The EU eProcurement ontology steps on standardized public procurement reporting forms and the EU Tenders Electronic Daily (TED), but adds a lot more details about electronic procurement, framework agreements, presented documents, etc. It enables semantic data integration, e.g. in the upcoming EU Public Procurement Data Space. I performed a review of the ontologies and contributed a number of improvement suggestions, see Github projects <a href="#">OP-TED/ePO</a> and <a href="#">OP-TED/model2owl</a>
1/2022-12/2022	UNCEFACT and W3C Credentials Community Group. Orie Steele and Nis Jespersen, transmute.industries. WG leads	Semantic consultant	The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) has started converting its data standards to semantic form. In parallel, the W3C Credentials Community Group has started a project for trade Traceability using Distributed Identifiers and Verifiable Credentials. Based on my knowledge of ontologies and experience with GS1 standards, I performed extensive reviews and contributed improvement suggestions. See my contributions in Github projects <a href="#">uncefact/spec-jsonld</a> , <a href="#">uncefact/vocab</a> and <a href="#">w3c-ccg/traceability-vocab</a> .
4/2021-now	IEC TC57: <a href="mailto:Svein.Harald.Olsen@statnett.no">Svein.Harald.Olsen@statnett.no</a> (Statnett Semantic Architect), <a href="mailto:Chavdar.Ivanov@griddigit.eu">Chavdar.Ivanov@griddigit.eu</a> (CIM expert), <a href="mailto:Eric.Stephan@pnnl.gov">Eric.Stephan@pnnl.gov</a> (CIM expert)	CIM semantic consultant	The IEC Common Information Model (CIM) and its extension ENTSO-E Common Grid Model Exchange Standard (CGMES) is the foundation of holistic data exchange in the electricity enterprise. It's a comprehensive UML model from which semantic artifacts are generated: RDFS ontology and more recently SHACL shapes and DTML. CIM data is exchanged in RDF XML, and more recently JSON-LD. Statnett (NO's Transmission System Operator) and EDF (FR's largest electricity producer) use Ontotext GraphDB and CIM in their projects. I have been helping these and other experts to improve the semantic representation of CIM and energy reference data. See my contributions in these Github projects: <a href="#">3lbits/ElBits_Utility_Standardization</a> , <a href="#">Haigutus/Energy-Reference-Data</a> , <a href="#">digin-energi/Grunnprofil</a> , <a href="#">Sveino/Nordic44</a> . We have also developed a CIM demonstrator using GraphDB and Ontotext Semantic Objects (see <a href="#">Transparency Energy Knowledge Graph</a> below)

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6-8/2022	Cariad (Volkswagen)	Semantic consultant	Semantic consulting for Cariad's KG project LinDa (Linked Data). Consulted on the use of inference and the Ontotext Semantic Objects platform (GraphQL consumption of KG data).
2/2022-7/2022	<a href="mailto:Heather.Dunn@canada.ca">Heather.Dunn@canada.ca</a> ; Heritage Information Analyst - Standards, CHIN	Semantic Data Architect	Canadian Heritage Information Network (CHIN) published its Nomenclature thesaurus for museum cataloging as RDF linked data. Working together with the Semantic Web Company, Ontotext created a fault-resilient GraphDB architecture for the public LD and SPARQL endpoint. I specified the semantic representation using SKOS, SKOS-XL, schema.org; created semantic conversions of concept and history event data, obtained labels of exactMatch concepts from external repositories, etc.
1/2022-6/2022	Brad Warnick, CTO, Stratesphere. <a href="mailto:bwarnick@stratesphere.com">bwarnick@stratesphere.com</a>	Semantic Data Architect	The Kognetics system provides strategic advice on merger and acquisition opportunities. ONTO consulted Stratesphere on its transition from a property graph (Neo4j) to a semantic knowledge graph (GraphDB). My work included creation of semantic models, generation of SPARQL transformation scripts from models, semantic conversion of large datasets (e.g. Crunchbase), data integration, entity matching based on tickers and various URLs, derived metrics (e.g. industry convergence, heuristic company type, "acquirability" score between companies), writing complex queries to compute insights and answer business questions.
6/2020-8/2022	US AirForce; US Department of Energy Office of Scientific and Technical Information (DoE OSTI); US Energy Information Administration; Keylogic <a href="mailto:Alexander.Karman@keylogic.com">Alexander.Karman@keylogic.com</a> , senior consultant	Semantic and ontology consultant	Keylogic (formerly Information International Associates) is a key IT supplier to the US government. We've collaborated in two areas: <ul style="list-style-type: none"> <li>US AirForce's Visible Accessible Understandable Linked Trusted (VAULT) data science environment</li> <li>Two energy-related US agencies</li> </ul> We developed proofs of concept demonstrating the value of big data analytics and semantic KGs; in particular involving satellites, marine vessels, energy KGs. Based on this and other experiences, I developed the ideas of Semantization of Data Science and Machine Learning and the benefits this can enable.
8/2021-3/2022	<a href="mailto:marcel.schoengens@six-group.com">marcel.schoengens@six-group.com</a> , enterprise data architect, Swiss Infrastructure and Exchange (SIX Group)	Semantic Data Architect	We created an "Entity Master" Knowledge Graph (KG) for SIX as a proof of concept, by semantic integration of company data from SIX, GLEI, Wikidata; industry classifications (SIX, GICS, ICB, NACE, SIC, WD); identifiers (SIX, LEI, DUNS, ISIN, MIC and ticker, website, 11 national identifiers). Created proposal and plan, semantic model, data integration, business queries to demonstrate the value of the KG.
12/2021-06/2022	<a href="mailto:Miroslav.Chervenski@ontotext.com">Miroslav.Chervenski@ontotext.com</a> , lead of KG Solutions	Project Lead	The <a href="#">Transparency Energy Knowledge Graph</a> project creates a knowledge graph from <a href="#">ENTSO-E Transparency</a> data and, thus, demonstrates the benefits of using Linked Open Data for analytics in the electricity domain. It won cascade funding by the European Union's Horizon 2020 research and innovation programme as part of the INTERRFACE <a href="#">3rd Open Call for Proposals</a> . See the app <a href="https://transparency.ontotext.com/app/">https://transparency.ontotext.com/app/</a> , blog <a href="#">Ontotext's Perspective on an Energy Knowledge Graph</a> and presentations at the app page, in particular <a href="#">Transparency Energy Knowledge Graphs for Energy Traceability</a> , <a href="#">Transparency Energy Knowledge Graph</a> and <a href="#">Advanced SHACL Data Validation for the Transparency Energy KG</a> . My contributions include conception, winning proposal, requirements specification, project management, data analysis, data modeling and semantic integration, validation rules, analytics definition, delivering reports and presentations.

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3/2019-12/2022	<a href="mailto:Miroslav.Chervenski@ontotext.com">Miroslav.Chervenski@ontotext.com</a> , lead of KG Solutions	Chief Data Architect	Setting company standards and practices in semantic modeling and data integration. Participate in development of the <a href="#">Ontotext Platform</a> that facilitates Knowledge Graph building and consumption through simplified APIs (GraphQL). Designed the <a href="#">Semantic Object Modeling Language</a> . Consulting and training engagements with clients. Participate in the following W3C Community Groups, adding ONTO input to important semantic technology future developments and decisions: <a href="#">SPARQL 1.2</a> , <a href="#">Bridging GraphQL and RDF</a> , <a href="#">Entity Reconciliation</a> . Also participate in these domain-specific Community Groups: <a href="#">Art &amp; Culture (Museums) On The Web</a> , <a href="#">Financial Industry Business Ontology</a> , <a href="#">Knowledge Graph Construction</a> , <a href="#">RDF and XML Interoperability</a> .
3/2021-12/2022	<a href="mailto:craig.alan.repec@gs1.org">craig.alan.repec@gs1.org</a> , Supply Chain Visibility, EPCIS & RFID; GS1 Global Office. <a href="mailto:Phil.Archer@gs1.org">Phil.Archer@gs1.org</a> , Director Web Solutions, GS1 Global Office.	Invited expert to Mission-Specific Work Group (MSWG) for GS1 EPCIS 2.0 and CBV 2.0 (and GS1 Voc)	GS1 is the most important standards organization in transport and logistics. The EPCIS and CBV standards represent “object visibility” events that result from barcode/RFID scanning. Version 2 introduces the use of RDF, JSON-LD, and logistics master data stored at permanent URLs using GS1 Digital Link and represented using the GS1 Web Vocabulary. This facilitates the deployment of distributed stores of logistics events and logistics master data, represented as semantic Linked Data using the EPCIS, CBV and GS1 WebVoc ontologies. Additions include: <ul style="list-style-type: none"> <li>• Sensor-captured data in EPCIS events (e.g., cold chain temperature excursions)</li> <li>• Certification info, covering organizations, places, products, and optionally linked to event</li> <li>• Party certification information (e.g., record of trade-relevant supplier certifications)</li> <li>• Comprehensive Business Vocabulary (including machine-readable attributes for event validation)</li> <li>• Addition of JSON/JSON-LD syntax to EPCIS</li> <li>• Addition of EPCIS ontology and SHACL shapes</li> </ul> See my contributions at: <ul style="list-style-type: none"> <li>• <a href="https://github.com/gs1/EPCIS">https://github.com/gs1/EPCIS</a>: JSON, Turtle, Diagrams examples; Ontology (EPCIS and CBV), EPCIS SHACL</li> <li>• <a href="https://github.com/gs1/EPCIS/issues?q=author:VladimirAlexiev">https://github.com/gs1/EPCIS/issues?q=author:VladimirAlexiev</a></li> <li>• <a href="https://github.com/gs1/WebVoc/issues?q=author:VladimirAlexiev">https://github.com/gs1/WebVoc/issues?q=author:VladimirAlexiev</a></li> <li>• <a href="#">EPCIS 2.0 Semantics</a> (draft)</li> </ul>
10/2020-12/2020	Dr.-Ing. Christian Block, Business / IT Analyst, <a href="mailto:block@eclass-office.com">block@eclass-office.com</a> . Work Group lead for eClass RDF representation.	Semantic consultant	eClass (and BMEcat) is one of the most important product classifications and product/parts data description catalogs (along with the IEC Component Data Dictionary, CDD). The eClass RDF working group included representatives of Schneider Electric, SIEMENS (Olivier Drumm, Sebastian Käbisch, Darko Anicic), Paradine, Morphe and the eClass Office. I consulted on principles of representing product data, “ontological realism” vs focusing on IT representation artifacts, pros and cons of ISO 13584-32 OntoML Conceptual data model, IEC 61360 PLIB, IEC 62656 Parcelized Object Model (POM); Units of Measure ontologies and criteria for their evaluation; RDF literals and datatypes; IRDI vs URL; permanent vs versioned identifiers; relations to schema.org, GS1 WebVoc; usage in Web of Thing Description, I4.0 RAMI/AdminShell, AutomationML. Developed a comprehensive presentation and 49-page document.
9/2020-6/2021	J.P. Morgan Chase	Semantic consultant	JPMC is one of the largest global banking institutions. It uses Ontotext products in 3 distinct projects. I consulted on ontology engineering, representation of temporal information, setting up Elastic connectors, etc

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4/2021-12/2022	<a href="mailto:Miroslav.Chervenski@ontotext.com">Miroslav.Chervenski@ontotext.com</a> , lead of KG Solutions	Semantic modelling and data integration	The PLANET H2020 project (Progress towards Federated Logistics through the Integration of TEN-T into A Global Trade Network) addresses the challenges of assessing the impact of emerging global trade corridors on the TEN-T network and ensuring effective integration of the European to the Global Network. PLANET aims to advance EC's strategy for smart, green and integrated T&L by proposing an Integrated Green EU-Global T&L Network (EGTN), which will interconnect infrastructure with geopolitical developments. The project will go beyond strategic transport studies and ICT for transport research, by rigorously demonstrating the emerging concepts (physical Internet) and technologies (IoT, blockchain) in three EU-global real-world corridors (China – EU- US). I work on semantic integration of various datasets and enrichment of GS1 EPCIS with semantic concepts (see EPCIS 2.0 contribution)
4/2021-12/2022	<a href="mailto:Miroslav.Chervenski@ontotext.com">Miroslav.Chervenski@ontotext.com</a> , lead of KG Solutions	Semantic modeling and data integration	The FSM H2020 project (Food Safety Market) develops an industrial data platform that will improve the way food certification takes place in Europe, give it a digital boost, and improve its competitiveness. Aims to create a collaborative virtual environment that would facilitate data exchange between different participants in the certification process. I work on integrating, populating and extending multilingual food safety data ontologies and classifications; integrating, customizing and improving data ingestion, curation, data combination, linking, transformation and delivery workflows. Some of the datasets considered for integration are Foodakai, Foodex2, LanguaL, OpenFoodFacts, USDA Food Central, MESH, PubMed publications, etc.
1/2019-12/2020	Kiril Simov <a href="mailto:kivs@bultreebank.org">kivs@bultreebank.org</a> , research infrastructure lead	digital humanities, semantic integration	CLADA BG is a National Interdisciplinary Research E-Infrastructure for Bulgarian Language (interfacing to EU CLARIN) and Cultural Heritage and digital humanities (interfacing to EU DARIAH). ONTO participates in both parts, and I lead the work on digital humanities. Started creation of a Bulgarian KG of important people and events. Ingested various METS datasets. Converted and linked data on Bulgarian icons, icon painters, families, art schools, saints, churches and monasteries to Wikidata and Europeana. Deployed the Ontotext Platform. Performed Semantic Annotation of various texts. Provided access to n-grams and other linguistic corpora.
11/2019-1/2020	<a href="mailto:Vassil.Momtchev@ontotext.com">Vassil.Momtchev@ontotext.com</a> : CTO	semantic modeler	<a href="#">InnoRate</a> is a H2020 project that develops data-driven tools for supporting and improving the decision-making processes of investors for financing innovative SMEs, using a Korean assessment methodology. Created semantic data model using the ONTO Platform, and stepping upon the ONTO Company Graph data model and dataset developed in CIMA.
11/2019-1/2020	<a href="mailto:Ivaylo.Kabakov@ontotext.com">Ivaylo.Kabakov@ontotext.com</a> : lead of Semantic Solutions group	strategy consulting	Consulted a top-10 global law firm on topics such as LegalTech, enterprise Knowledge Graphs, innovation management, eDiscovery and Technology-Assisted Review, electronic contract management.
2019	<a href="mailto:Todor.Primov@ontotext.com">Todor.Primov@ontotext.com</a> : lead of Innovation and Consulting group	semantic modeling	The <a href="#">BigDataGrapes</a> project enables disruption of the Grapevine-powered industries and precision agriculture through the use of big data. It incorporates and integrates a variety of data from earth observation, weather, field measurements, plot management, the wine making process, degustation etc. Developed the core of the <a href="#">BDG semantic model</a> , which incorporates elements from W3 CUBE (QB), CUBE 4 Spatio-Temporal data (QB4ST), Semantic Sensor Networks (SSN), Quantities and units of measure (QUDT), etc
2019; 2021	Stellantis (Groupe PSA + Fiat Chrysler)	Semantic consultant	Consulted on structuring and approaches for building a semantic end-user vehicle configuration application. Consulted on ontology model, complex SPARQL queries, the use of a Constraint Solver for finding compatible configurations and versions to satisfy user-requested functions.

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10/2018-10/2019	<a href="mailto:Larisa.LORINCZI@ec.europa.eu">Larisa.LORINCZI@ec.europa.eu</a> , project manager, EU DG RTD	Dataset researcher, ontology engineer, semantic data integration, wrote significant part of the winning proposal	The project <a href="#">Tracking of Research Results</a> (4M EUR, EU DG Research and Technological Development that manages the EU Framework Programs) enables EU policy makers in research and innovation to access, analyze and disseminate in a comprehensive manner the outcomes and impacts of FP7 funded research results. This 4-year long commercial project analyzes 8000 projects in the core FP7 Specific Program 1 (Cooperation) along 14 defined indicators. Our tasks: build a Science Knowledge Graph covering projects, participating organizations, researchers, topics, research outputs such as publications and datasets, etc. Semantically integrate data from various sources: OpenAIRE, CrossRef, Microsoft Academic Graph, ORCID, etc. Wrote tech part of winning proposal, led data integration work. Obtain, integrate and analyze data on specific indicators, such as Scientific Prizes, recognitions such as memberships in Learned Societies, Dissemination activities, Industrial and Innovation impact, researcher Next Destinations (mobility), etc.
5/2018-5/2020	<a href="mailto:Atanas.Kiryakov@ontotext.com">Atanas.Kiryakov@ontotext.com</a> , CEO, Ontotext	Project management, dataset research, semantic integration, ontology and RDF shapes, wrote the technical proposal	The Intelligent Matching and Linking of Company Data ( <a href="#">CIMA</a> ) project uses AI technologies for linking and harmonizing company data from various sources. The project applies machine learning, semantic modeling and data integration as well as logical inference and validation to make company and related data (persons, locations, industry taxonomies, technology fields) better harmonized, integrated, interlinked and easier to use. CIMA is funded by the European Union's Regional Development Fund through Operational Programme "Innovations and Competitiveness 2014-2020" call "Intelligent Specialization". The project duration is 2 years and the budget is 1.5M BGN.
6/2018-11/2018	Radu Marian, VP, Architect 2, Global Information Security, Bank of America	ontologies, semantic modeling, semantic data integration	A POC project to integrate data on information security (attack patterns and techniques, groups, malware, vulnerable software, kill chains, etc) from various sources, including MITRE ATTACK (pre, enterprise, mobile), CAPEC, etc. Most data was in the Structured Threat Information Expression (STIX) format by OASIS-Open's Cyber Threat Intelligence (CTI) Technical Committee. Lifted from JSON to RDF and mapped to a Cyber Threats Control Ontology (CTCO) by Bank of America. Work proceeded to a second POC to create relations between security-related resources. Client reference: "During our pilot project engagement Vladimir provided very helpful enterprise linked data architecture guidance. This helped us avoid project delays as well as enabled us to better understand the domain and its data. Vladimir also has demonstrated efficient ontology design communication methods that allowed the rest of the team to be on the same page. Vladimir was quite helpful in addressing research questions for possible future proof of concepts."
9/2017-2/2018	Ontotext Corp: <a href="mailto:Atanas.Kiryakov@ontotext.com">Atanas.Kiryakov@ontotext.com</a> , CEO	Project management, semantic integration	Building a Knowledge Graph of companies and financial transactions for investment analytics for one of the top-5 consulting companies world-wide. My roles included writing a significant part of the technical proposal, project management, dataset research and analysis, creation of a semantic model, semantic integration pipeline and ETL, team coordination.



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1-7/2017; 1-9/2018; 12/2021- 3/2022	<a href="mailto:Heather.Dunn@canada.ca">Heather.Dunn@canada.ca</a> : Heritage Information Analyst - Standards, <a href="mailto:Louise.Poulin@canada.ca">Louise.Poulin@canada.ca</a> : Manager, CHIN Program Development.	Semantic strategy consultant	<p>The Canadian Heritage Information Network (CHIN) is part of Patrimoine Canada Heritage (PCH), the Canadian ministry of culture. CHIN is the Canadian national aggregator for cultural heritage, gathering information from over 500 museums and galleries. CHIN has embarked on redeveloping the aggregator based on Linked Open Data. To this end we provided strategic consulting, which included an Environment Scan of relevant projects, ontologies, datasets and tools; Review of CHIN's LOD pilot in 2016 (called ALOD), 4-year Strategy including steps to be taken, staffing and strategic considerations, Final Report. Work continued with a face to face workshop in Ottawa (7/2017), semantic technology training, analysis of the present Artefacts Canada collection (5M objects): data quality problems, potential for matching of key fields (artist, places, subject, material, technique, culture) against established thesauri (Wikidata, VIAF, Artists in Canada, Geonames, Getty AAT, etc), statistics on coverage of key fields per collection, etc. Then we consulted the elaboration of national authorities: Nomenclature for Museum Cataloging (based on a semantic Thesaurus Management System), Creators in Canada (based on a semantic mapping of the existing Artists in Canada database, with significant extensions from data sources like VIAF, Wikidata, LAC, BANQ, CLARA, etc).</p> <p>Technologies used: OntoRefine with reconciliation, data analytics tools, data science tools (R, Shiny)</p> <p>Services Rendered:</p> <ul style="list-style-type: none"> <li>• Semantic strategy consulting; Semantic technology training</li> <li>• Research and overview of relevant CH ontologies, datasets, projects, initiatives; datasets and data flows</li> <li>• Analysis of existing Artefacts Canada data</li> <li>• Nomenclature: data model, query development, semantic publishing, Wikidata integration, coreferencing to other thesauri; VOID semantic description</li> <li>• Task breakdown and estimation; Creating description of relevant positions to be hired (semantic architect); Definition of services to be developed, e.g. semantic publishing, SPARQL endpoint</li> <li>• Agile project management</li> </ul>
7/2017- 3/2018	Rob Hudson, Manager Archives, <a href="mailto:rhudson@carnegiehall.org">rhudson@carnegiehall.org</a> , Carnegie Hall	Semantic technology consultant	Carnegie Hall published LOD about performances, performers etc using Ontotext GraphDB. I've been advising them on aspects of semantic data integration, use of ontologies, linking to external datasets, etc. As a nascent continuation project, we are working on a semantic model and editorial interfaces for the African American Music Timeline project.
10/2017- 4/2018	<a href="mailto:Atanas.Kiryakov@ontotext.com">Atanas.Kiryakov@ontotext.com</a> , CEO, Ontotext	PM, Semantic modeling, business analysis	A large commercial project for semantic integration of data about startups, companies, funding rounds, acquisition transactions, IPOs, geographic information, hi-tech and other hi-growth areas, economic/industry classifications, etc. We integrate data from about 9 sources, convert to a harmonized data model, match companies and transactions across datasets, and use visualizations, graphics, faceted search, geographic mapping etc to derive strategic insights.

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1/2017-1/2020	<a href="mailto:Dumitru.Roman@sintef.no">Dumitru.Roman@sintef.no</a> , euBusinessGraph project coordinator	Semantic data modeling	<a href="http://eubusinessgraph.eu/">http://eubusinessgraph.eu/</a> is a H2020 research project to integrate European company and economic data from various data providers, including OpenCorporates (the largest open database of company info crawled from official registers), Norway's Bronnoysund Register Center (official register data), SpazioDati (rich IT data from official registers, additional databases, web crawl of company sites, tender info), EventRegistry events, Global Legal Entity Identifier, Panama Leaks, etc. Ontotext provides the semantic data infrastructure for the project, see <a href="http://data.businessgraph.io/">http://data.businessgraph.io/</a> . I have created the <a href="#">euBusinessGraph Semantic Data Model</a> , RDF shapes for validation (SHACL and ShEx), specified semantic conversions of various datasets including the Bulgarian Trade Register, organized gathering and integration of economic and geographic data (NACE, NUTS, LAU, see <a href="https://github.com/euBusinessGraph/eubg-data">https://github.com/euBusinessGraph/eubg-data</a> ). Presented at the Semantics 2017 conference: <a href="#">euBusinessGraph: Company and Economic Data for Innovative Products and Services, presentation, poster</a> .
9/2015-7/2017	Anand Deshpande, Vice President IT, S&P Global Inc	Ontology consultant	Analysis and mapping of Platts databases on symbols, quotations, commodity product lines (oil and gas, coal, agrofuels, energy, emissions), refineries, commodity flow/shipping. This work was part of two strategic enterprise projects: Data Linking Project (harmonization and interlinking of corporate databases) and Content Creation Platform (semantic annotation/enrichment/indexing of commodity analyst reports).
4/2016-8/2017	<a href="mailto:EleanorFink@earthlink.net">EleanorFink@earthlink.net</a> : program director of American Art Collaborative	Ontology consultant	The American Art Collaborative comprises 14 US museums and galleries that publish their data as LOD using the CIDOC CRM ontologies, with the help of funding from the Andrew Mellon Foundation. I participated as a consultant for semantic modeling and data mapping and participated in several workshops: 4/2016 at the Getty (Los Angeles, CA), 7/2017 at the Smithsonian American Art Museum (Washington DC). Worked alongside the Semantic Architect and the Data Architect of the Getty Research Institute. The <a href="http://linked.art">http://linked.art</a> data model (a simplified profile of CIDOC CRM) originated from these efforts. Services: <ul style="list-style-type: none"> <li>• Consulting on data mapping and integration using CIDOC CRM. Explaining mapping patterns</li> <li>• Posting of detailed bug reports (over 200)</li> <li>• Advice on semantic publishing</li> </ul>
4/2016-1/2017	J. Paul Getty Museum. Brenda Podemski, <a href="mailto:bpodemski@getty.edu">bpodemski@getty.edu</a>	CIDOC CRM expert	Mapping the J. Paul Getty Museum data to CIDOC CRM; standardization of various “micro-thesauri” (e.g. Agent Role) by mapping and adding to AAT.
1/2016-12/2017	<a href="mailto:Antoine.Isaac@europeana.eu">Antoine.Isaac@europeana.eu</a> , Europeana scientific coordinator	Members Council and DQC	The Europeana Members Council helps Europeana setting strategy for its future work. The Data Quality Committee is a standing Working Group that researches approaches and makes recommendations aiming to improve the quality of data in Europeana, which is an important strategic goal for the next several years.



From-To	Company & Reference Person	Role	Description
6/2015-6/2019	<a href="mailto:C.Kristel@niod.knaw.nl">C.Kristel@niod.knaw.nl</a> , project coordinator. <a href="mailto:ellen.leenarts@dans.knaw.nl">ellen.leenarts@dans.knaw.nl</a> , WP10 & WP13 lead. <a href="mailto:Tobias.Blanke@kcl.ac.uk">Tobias.Blanke@kcl.ac.uk</a> , WP14 lead.	Ontotext PM, XML conversion, semantic data integration, Authority development, mapping networks of people	<p>The <a href="#">European Holocaust Research Infrastructure</a> (EHRI) is a long-term project: EHRI1 was 4 years, EHRI2 is 4 years (finishing 2019), and the project heading towards becoming a permanent consortium (ERIC). EHRI aims to develop a Virtual Research Environment for Holocaust studies, integrating databases and archival guides of the important institutions working in this domain. Ontotext was invited in EHRI2 for its expertise with semantic technologies: text enrichment, semantic data integration, thesaurus management, ontology design. Ontotext is involved in these work packages:</p> <ul style="list-style-type: none"> <li>• WP10: tool to convert partner institution data to EAD (Encoded Archival Description), EAC-CPF (Encoded Archival Context: Corporations, Persons, Families), SKOS (Simple Knowledge Organization System); interlinking to the EHRI thesaurus</li> <li>• WP11: establish a Thesaurus Management System to maintain the EHRI thesaurus. Large-scale data integration of partner databases and thesauri, thesaurus coreferencing, ontology engineering, semantic publication of EHRI LOD.</li> <li>• WP13: semantic text analysis and interlinking, repository of Research Objects</li> <li>• WP14: digital historiography, semantic text analysis to extract entities and events, prosopography, reconstructing Person Networks (from databases such as USHMM HSV, proceedings of the Jewish Council Amsterdam, etc)</li> </ul> <p>Partners include key Holocaust archives such as Yad Vashem, USHMM, Memorial de la Shoah, NL NIOD; and important cultural heritage and digital humanities institutions such as NL DANS (Data Archiving and Networked Services), KCL, INRIA. Three DARIAH directors are involved in the project.</p>
6/2015-11/2015	Steven Stegers, deputy director EUROCLIO, <a href="mailto:steven@euroclio.eu">steven@euroclio.eu</a> . Milena Popova, <a href="mailto:milena.popova@europeana.eu">milena.popova@europeana.eu</a>	Task force member	<p>The <a href="#">Europeana for Education</a> task force has the mission to identify ways in which the <a href="#">policy recommendations on "Europeana for Education"</a> can be put into practice. It should develop a shared vision on what an enabling environment is in which digital heritage is used for educational purposes, and detail what the benefits are for each type of stakeholders. Semantic technologies have the power to identify and classify Europeana materials in specific domains, and thus have a strong role to play for realizing this vision. These recommendations for the use of digital cultural heritage in education and learning were developed by experts from European Ministries of Culture and Education from 21 different countries and external experts in 2014/2015, facilitated by the Europeana Foundation, European Schoolnet (EUN) and European Association of History Educators (EUROCLIO).</p> <p>Ontotext was invited to the Europeana for Education task force because of its experience with applying semantic technologies to Europeana metadata. Ontotext had many fruitful discussions with EUROCLIO within the Europeana Creative project. Now Ontotext is working on semantic enrichment and classification of Food and Drink content within the EFD project, based on Wikipedia articles and categorization. We hope that the same general approach can be applied to educational content.</p>
12/2013-now	Wikidata	Contributor	<p>Wikidata aims to provide a central database of facts to be used in all national Wikipedias. Wikidata has become a hotbed of activity related to cultural heritage and large-scale authority database coreferencing. I established <a href="#">WikiProject Authority control</a> for some coordination in this area, and I contribute actively, especially on Getty and British Museum thesauri. Active user of Mix-n-Match for thesaurus matching. See presentations <a href="#">GLAMs Working with Wikidata</a> and <a href="#">Wikidata, a Target for Europeana's Semantic Strategy</a> (the most viewed presentation at Glam-Wiki 2015), and twitter <a href="#">#coreferencing</a>. Participant in the <a href="#">WikiCite17</a> conference and hackathon.</p>

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12/2013-12/2015	Dimitris Kontokostas, <a href="mailto:kontokostas@informatik.uni-leipzig.de">kontokostas@informatik.uni-leipzig.de</a> : DBpedia CTO	Dbpedia Data Quality and Ontology committee co-lead, DBpedia Association member representative	DBpedia is the center of the Linked Open Data cloud and holds huge importance for the LOD movement and as a source of stable URLs to link to. DBpedia also provides large amounts of domain-specific data, from automobile engines to paintings and museums. The DBpedia ontology has moderate complexity (some 685 classes and 2800 properties). The DBpedia ontology and template mappings are developed collaboratively at <a href="http://mappings.dbpedia.org">http://mappings.dbpedia.org</a> , using a Wiki. However, they have a number of quality problems, mainly due to insufficient editorial process and curation. As a result, currently even RDFS reasoning is not useful for DBpedia. These quality problems are outlined in various research papers, and were a central topic of discussion at the DBpedia Dublin meeting (Feb 2015). A committee was formed to make guidelines and best practices for improving the ontology and mappings, in order to facilitate quality improvement for DBpedia's future half-yearly release process. See <a href="#">DBpedia 2015-04 release notes</a> credits: "Vladimir Alexiev (Ontotext) for leading a successful mapping and ontology clean up effort."
1-4/2015	Juliane Stiller, Humboldt-Universität zu Berlin, <a href="mailto:juliane.stiller@ibi.hu-berlin.de">juliane.stiller@ibi.hu-berlin.de</a>	Task force member	The Europeana Task force on <a href="#">Evaluation and Enrichments</a> has the following goals: <ul style="list-style-type: none"> <li>• collect enrichment processes, workflows and efforts in the Europeana network including correcting of enrichments through crowdsourcing, assess what they have in common and how they differ,</li> <li>• enhance the interoperability of enrichment services/modules, for example by identifying problems which hinder interoperability,</li> <li>• determine a set of methods (incl. metrics) to evaluate the impact of enrichments,</li> <li>• help participating projects enhance the enrichment services they are creating, by collecting appropriate vocabularies for enrichment and enrichment rules, and</li> <li>• pin-point the most promising ways to include human feedback in the workflow.</li> </ul>
11/2013-10/2016	<a href="mailto:Atanas.Kiryakov@ontotext.com">Atanas.Kiryakov@ontotext.com</a> , CEO, Ontotext	Ontology engineer, esp. for Linguistic Linked Data (was Ontotext PM as well)	MULTISENSOR (Mining and Understanding of multilingual content for Intelligent Sentiment Enriched context and Social Oriented interpretation) is a 3-year EU funded research project to advance multilingual media analysis technologies. The goal is to enable users (e.g. journalists, entrepreneurs) to attain a comprehensive and exact understanding of topics they are engaged in, not only from their own but from multiple viewpoints. Scanning multiple heterogeneous sources: gather and semantically integrate various local subjective and biased views disseminated via TV, radio, mass media websites and social media. Using sentiment, social and spatiotemporal methods, MULTISENSOR helps to interpret, relate and summarize economic information and news items. Main role: storing and inference service, semantic representation of NLP data using NIF (NLP2RDF), OLIA, MARL, FrameNet, validating RDF data using automatic (RDFUnit) and manual approaches.
10/2014	<a href="mailto:Michel.Dumontier@stanford.edu">Michel.Dumontier@stanford.edu</a> , Stanford University	Contributor	Contributed to <a href="#">Dataset Descriptions: HCLS Community Profile</a> , which is a community standard for describing datasets in the Health Care and Life Sciences domain. Contributed to describing <a href="#">dataset statistics</a> and several other issues.
10/2013-12/2013	<a href="mailto:Atanas.Kiryakov@ontotext.com">Atanas.Kiryakov@ontotext.com</a> , CEO, Ontotext	Ontology contributor	Contributed to the <a href="#">ISO 25964 ontology</a> , the latest ISO standard on Thesauri. See <a href="#">Linked Open Vocabularies entry</a> . The Getty work represents the first industrial use of ISO 25946. Defined appropriate combinations of varieties of Broader relations: Generic, Partitive, Instantial (BTG, BTP, BTI), which are first formally defined in ISO: see <a href="#">On the composition of ISO 25964 hierarchical relations (BTG, BTP, BTI)</a>

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8/2013-6/2021; 1/2022-12/2022	Getty Research Institute (J. Paul Getty Trust): Patricia Harpring, Managing Editor, Getty Vocabulary Program, <a href="mailto:pharpring@getty.edu">pharpring@getty.edu</a> Joan Cobb, senior architect & PM for Getty LOD, <a href="mailto:jcobb@getty.edu">jcobb@getty.edu</a>	PM, Ontology engineer, design and implement data conversions and semantization	<p>The Getty Vocabularies (AAT, TGN, ULAN, CONA) are very important and famous in the Cultural Heritage and Digital Humanities communities. Getty has been instrumental in thesaurus development (International Terminology Working Group), setting and applying standards for metadata about cultural objects (CDWA and LIDO) and for describing them (CCO).</p> <p>This project publishes the Getty Vocabularies as Linked Open Data: <a href="http://vocab.getty.edu">http://vocab.getty.edu</a>. We use the following ontologies: SKOS, SKOSXL, ISO 25964 for representing thesaurus info; DC, DCT for common properties; BIBO, FOAF for sources and contributors; PROV for revision history; RDF, RDFS, OWL, XSD for system properties; R2RML for implementing the conversion; and a number of Descriptive ontologies (VOID, VOA, ADMS, DCAT, etc). We provide the semantic repository (GraphDB enterprise edition, i.e. clustered for high-availability), a customized semantic frontend written in Java, SPARQL 1.1 compliant querying, per-entity export files, data loads with explicit and total statements, etc.</p> <p>The AAT, TGN, ULAN publications are completed. Work is proceeding with CONA (the most complex thesaurus) and involves conversion from CDWA/LIDO to CIDOC CRM.</p> <p>We've also started work on Getty AATA, a comprehensive bibliography &amp; abstracts of literature related to the preservation and conservation of material cultural heritage. We are considering FRBRoo and BibFrame for this publication.</p> <p>The Cultural Heritage community has shown great interest in the semantic publication. ONTO consulted Getty on publishing the Getty Vocabularies as Linked Open Data in RDF; CIDOC CRM mapping (mapping JP Getty Museum data, Getty CONA to CIDOC CRM and its Linked Art profile, as well as in consulting the American Art Collaborative that was supported by the Getty). ONTO developed subsystems and scripts for converting partner submissions from Excel and Place Gazetteer data from RDF to XML ingest schemas for the 4 Getty vocabs, validated data quality of submissions (sometimes taking multiple iterations) and worked on quality of lookup data (e.g. matching of lang tags to ISO standards, matching to RKD thesauri, etc).</p> <p>I developed the complete mapping specification and worked with the External Reviewers group (includes people from OCLC, Europeana, the ISO 25964 working group...). Defined language tags for exotic languages. Helped with implementation of R2RML scripts working off Getty's Oracle database, contributed to the Perl implementation (RDB2RDF) and an R2RML extension (rrx:languageColumn). Developed user documentation (100 pages), sample queries (60 and growing). Managed the project. Worked on Windows 7 and 10, Solaris and Linux. Used UML (PlantUML) to describe the mapping, Jira for task tracking, Gitlab for source control.</p>
1/2014-6/2016	Susie Slattery, <a href="mailto:susie@collectionstrust.org.uk">susie@collectionstrust.org.uk</a> , EFD project coordinator	Ontotext PM, Semantic data integration	<p>Europeana Food and Drink (EFD) is a 30-month project to celebrate Europe's culinary heritage by contributing food and drink content to Europeana and developing a number of creative and industry-relevant applications. Ontotext's tasks are related to:</p> <ul style="list-style-type: none"> <li>Contributing Bulgarian recipes, helping other content partners to represent their data as EDM</li> <li>Semantic discovery and classification of FD-related content, developing the EFD Classification based on Wikipedia categories</li> <li>Developing a Semantic Demonstrator application.</li> </ul> <p>Others have already expressed interest to use our approaches for discovery and enrichment of content related to History Education (EuroClio) and art (Europeana)</p>

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5/2015-11/2015	Gregory Markus, <a href="mailto:gmarkus@beeldengeluid.nl">gmarkus@beeldengeluid.nl</a> , coordinator	Task force member	The Europeana <a href="#">Free, Libre, Open Source Software</a> task force investigates ways to improve the current FLOSS Inventory for Cultural Heritage software. It uses the following approaches: Standardizing necessary fields, update data for existing tools and new tools, check links, remove inactive tools, write tool reviews, analyze other existing tool catalogs, elaborate tool taxonomies. In particular, I helped map the data to the DOAP ontology.
10/2013-4/2014	Antoine Isaac, Europeana scientific coordinator, <a href="mailto:aisaac@few.vu.nl">aisaac@few.vu.nl</a> . Juliane Stiller, Humboldt-Universität zu Berlin, <a href="mailto:juliane.stiller@ibi.hu-berlin.de">juliane.stiller@ibi.hu-berlin.de</a>	Task force member	The Europeana Task force on <a href="#">Multilingual and Semantic Enrichment Strategy</a> is motivated by Europeana's goal to ensure that enrichments unfold their whole potential and act as facilitators of access. The main work of the task force consists of developing a multilingual and semantic enrichment strategy. For that, suitable collections are identified as use cases and their metadata fields are analyzed to find matching controlled vocabularies which would be good candidates for enrichment. See <a href="#">final report</a> .
9/2012-2/2014	Prof Agostino Paravicini Bagliani, University of Lausanne, <a href="mailto:agostino.paravicini@unil.ch">agostino.paravicini@unil.ch</a>	Invited expert	EC COST Action IS1005 " <a href="#">Virtual Centre for Medieval Studies</a> " (VCMS). The main objective of the Action is to increase accessibility to and integration of medieval research results and tools through improved technological instruments and skills. The VCMS, made possible through exchange and networking within COST, could be a portal providing information on digitalised manuscripts, authenticity lists of medieval authors, bibliographies on medieval cultures and a library of medieval texts. The VCMS could integrate existing databases containing texts on medieval cultures, bibliographical references and dictionary articles.
2/2013-5/2014	Max Kaiser, Head of Research and Development, Austrian National Library, <a href="mailto:max.kaiser@onb.ac.at">max.kaiser@onb.ac.at</a> ; project coordinator	Ontotext PM, data modeling expert, semantic enrichment	Europeana Creative is a 30-months long European CIP PSP project involving 26 organizations ranging from museums and libraries, to innovation and creative hubs, to proven technical partners.. It will facilitate the re-use of Europeana cultural heritage metadata and content by the creative industries. It will establish an Open Laboratory Network, create a legal and business framework for content re-use, implement all needed technical infrastructure. It will create five pilot applications in the thematic areas of History Education, Natural History Education, Tourism, Social Networks, and Design, and then conduct open innovation challenges to identify, incubate and spin-off viable projects into the commercial sector. Ontotext participation: <ul style="list-style-type: none"> <li>• Content Reuse Framework. OWLIM is used for metadata storage and search, continuing our work on the experimental Europeana SPARQL endpoint</li> <li>• Geographic mapping and transformation algorithms, to be used for the creation and management of cultural routes as required by the Tourism pilot</li> <li>• Linking to external web resources (e.g. Freebase, DBpedia, Wikipedia, VIAF, Getty, Geonames).</li> </ul>
9/2013	Dr Milena Dobрева, Department of Library Information and Archive Sciences, University of Malta, <a href="mailto:milena.dobрева@um.edu.mt">milena.dobрева@um.edu.mt</a> ; TPDL 2013 general chair	workshop organizer	<a href="#">Practical Experiences with CIDOC CRM and its Extensions (CRMEX 2013)</a> , a workshop at the International Conference on Theory and Practice of Digital Libraries (TPDL 2013). The CIDOC CRM (international standard ISO 21127:2006) is a conceptual model and ontology with a fundamental role in many data integration efforts in the Digital Libraries and Cultural Heritage (CH) domain. It has spawned various CRM-compliant extensions, and influenced a number of CH data models, e.g. the Europeana Data Model - EDM. The goal of this workshop is to describe and showcase systems using CRM at their core, exchange experience about the practical use of CRM, describe difficulties for the practical application of CRM, and share approaches for overcoming such difficulties. The ultimate objective of this workshop is to encourage the wider practical adoption of CRM.

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6/2012-5/2013	Stefan Gradmann, KU Leuven, <a href="mailto:Stefan.Gradmann@kuleuven.be">Stefan.Gradmann@kuleuven.be</a> : task force convenor	Task force Member	<p>The <a href="#">EDM-FRBRoo Application Profile</a> task force is a working group in the context of Europeana with the objective to enrich the Europeana Data Model (EDM) with concepts from the Functional Requirements for Bibliographic References (object oriented) ontology (FRBRoo), in order to allow precise referencing between original works and derivations (e.g. translations, adaptations, librettos, etc). I worked with people from the Polish Digital Library (Justyna Walkowska) and NTNU (Trond Aalberg) to develop a number of examples on derivative works of "Don Quixote". We developed conversions from RDF to PlantUML for automatic diagramming, see <a href="#">blog at PolishDL</a>.</p> <p>I also helped the PolishDL to develop CIDOC CRM and FRBRoo models and to use Ontotext's RDF repository OWLIM to store RDF data about 3.5M Polish books and cultural objects. This makes it one of the largest CRM &amp; FRBRoo repositories available. See Mazurek, C., Sielski, K., Walkowska, J., Werla, M. From MARC21 and Dublin Core, through CIDOC CRM: First Tenuous Steps towards Representing Library Data in FRBRoo (CIDOC 2012).</p>
9/2011-12/2013	The British Museum (for Ontotext): Dominic Oldman, <a href="mailto:doldman@britishmuseum.org">doldman@britishmuseum.org</a> , ResearchSpace principal investigator	PM, Ontology Engineer	<p>ResearchSpace (<a href="http://www.researchspace.org">www.researchspace.org</a>) is a project of the British Museum funded by the Andrew W. Mellon Foundation. It aims to support collaborative web-based research, information sharing and web publishing for the cultural heritage scholarly community. The system is based on semantic technologies (OWLIM) and the CIDOC CRM ontology, which supports generic description of cultural artifacts, related events (e.g. creation, acquisition, curation, conservation), annotations, research discourse. It will include Data and digital analysis tools, Collaboration tools, Semantic RDF data sources, Web Publication, research tools such as Image Annotation, Image Compare, Timeline and Geographical Mapping, Semantic Search. Interactive and dynamic JS/AJAX (web 2.0) approaches are used. OWLIM was deployed on Solaris to benefit from the compressing file system zFS.</p> <p>One of the first large-scale practical deployments of CIDOC CRM: 2.5M museum objects, 900M triples. Search is based on the so-called CRM Fundamental Relations, and involves complex reasoning. See <a href="#">Large-scale Reasoning with a Complex Cultural Heritage Ontology (CIDOC CRM)</a> for info and comparison to other CH repositories.</p> <p>Roles: Technical solution and tender; Project management, task tracking, weekly meetings, client relation; Ontology engineering, data model, ETL and data management; Reasoning including OWLIM Rules and Description Logic; Research of related tools and projects; Business analysis</p>
12/2010-7/2011	Edamam (for Ontotext): Victor Penev, <a href="mailto:victor@abv.bg">victor@abv.bg</a> , owner. Founder of NetInfo, Bulgaria's largest Internet properties holding	Data processing, text analysis	<p>Edamam (<a href="http://www.edamam.com">www.edamam.com</a>) is a semantic knowledge base of foods, recipes, nutrients, cooking etc. Recipes are crawled from numerous sites; processed to extract knowledge about ingredients, cooking times, nutrition information; and presented through various dynamic and intelligent interfaces that allow sorting and filtering by a number of preferences. It was highlighted in a SemTech 2011 case study</p>
10/2010-1/2014	BG-KR IT Cooperation Center (ITCC): Jaehong Yoon, <a href="mailto:yoona4me@gmail.com">yoona4me@gmail.com</a> , ITCC coordinator	Advisory Board member	<p>Development of joint BG-KR projects, in particular application of Semantic Technologies to Cultural Heritage and Open Government Data publishing. Publishing of Bulgarian cultural heritage to Europeana (<a href="http://www.bulgariana.eu">www.bulgariana.eu</a>)</p>

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9/2009-11/2010:	Sirma IT Consulting; Tsvetan.Alexiev@sirma.bg, CEO Sirma Solutions Corp	Founder, Director	Full-service IT consulting: feasibility studies, gap analysis, system conception; IT strategy; Enterprise Architecture, Data Modeling, and Application Integration; Tender development, evaluation; evaluation of programmes, projects and proposals; IT security, audits; Project Management consulting, training, project cycle management, methodologies (PMBOK, PRINCE2, TEMPO); Business analysis and requirements specification. Manage EU Framework Contract "Beneficiaries" (FWC BEN) Lot3 "Telecommunications and information technologies, with consulting assignments in all phases of the project cycle.
4-6/2010	Ministry of Transport, Information Technology and Communications; Parvan Rusinov, <a href="mailto:prusinov@mtitc.government.bg">prusinov@mtitc.government.bg</a> , deputy minister	Workgroup Member	Member of the workgroup "Bulgaria e-Government Strategy". Focusing on the e-Government data model (Register of Information Objects, XML Schemas, Unified Document Exchange System and related topics). Establishment of web-based collaboration system
5/2010	Ministry of Education, Youth and Science (for Sirma IT Consulting); Lora Pavlova, <a href="mailto:l.pavlova@mon.bg">l.pavlova@mon.bg</a> , National Contact Point for FP7 Region of knowledge	BA, PM	EU project "Research Infrastructures: Foresight and Impact" (RIFI), FP7- INFRA-2008-3.0, project 228293. Establishment of website and content management system
1-4/2010	Ministry of Education, Youth and Science (for Sirma IT Consulting); Lora Pavlova, <a href="mailto:l.pavlova@mon.bg">l.pavlova@mon.bg</a> , National Contact Point for FP7 Region of knowledge	Business Analyst	EU project "Networking on Science and Technology in the Black Sea Region" (BS-ERA.NET), FP7-INCO-2007-3.1.2, project 226160, task 3.1 "Designing of a Joint Evaluation and Administration System (JES) for future multilateral calls". Responsibilities: JES concept, business analysis, UML use-case modeling, requirements specification.
12/2009-09/2010	Prosecutors Office of Bulgaria (for Sirma Solutions); Georgi Bonchev, <a href="mailto:gbonchev@prb.bg">gbonchev@prb.bg</a> , IT Director POB	PM, TL for Task1, Lead Analyst	Enhancement of the Information Systems at the Office of Prosecutor General for Combating Corruption (IDF Grant WBTF 058170-BUL CS-4184, financed by the World Bank). <ul style="list-style-type: none"> <li>Task1: concept, process modeling, business modeling, analysis, market analysis, hardware and software specifications for reengineering and future development of the Unified Information System (UIS) of POB, a system that handles all aspects of prosecutor case management. Includes integrations to UISCC and other government systems, e-Services, compliance with the Electronic Governance Law. Complete tender dossier for Operating Program Administrative Capacity</li> <li>Task2: development of Data Warehouse and Business Intelligence reports for UIS.</li> <li>Task3: development of anti-corruption system where prosecutors declare their annual earnings, other sources of income, real estate, other properties; purchases and sales during the year. Integration with the system of Bulgarian National Auditors Office</li> </ul> Responsibilities: developed technical offer, managed the project, led Task1, performed business modeling and analysis. Technologies: UML, RUP, Oracle 10g, Oracle Application Server, Oracle Business Intelligence Enterprise Edition, ARIS modeling, JEE5, Red Hat Enterprise Linux
8/2009-9/2010	Sirma Solutions & Sirma ITT (for Bulgarian Customs Administration); <a href="mailto:miroslav.chervenski@sirma.bg">miroslav.chervenski@sirma.bg</a> , PM	IT Consultant	Excise Management System phase 2.1: project PHARE BG 2007/019-303.06.04 "Development of national system for comprehensive Excise Management by the Customs Administration". Role: consulting on project management and system architecture



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5-8/2009	University of Ruse; Katalina Grigorova, <a href="mailto:katya@ami.ru.acad.bg">katya@ami.ru.acad.bg</a> , Director, Informatics and IT department	Masters level lecturer	Design and lecturing on IT/Software Project Management, Masters level university program on Software Engineering
5-8/2009	Varna Free University; Pavleta Krysteva, <a href="mailto:pavleta_vfu@abv.bg">pavleta_vfu@abv.bg</a> , program coordinator	Masters level lecturer	Design and lecturing on IT/Software Project Management, Masters level university program on Software Engineering
7/2008-10/2009	Bulgarian Customs Administration (for Sirma Solutions); <a href="mailto:Teodor.Martev@customs.bg">Teodor.Martev@customs.bg</a> , PM	PM, Lead Business/Process Analyst, Data Modeler, overall project planning and system architecture	Development of Export Control System phase 2 (ECS2): part of DG TAXUD eCustoms initiative, introducing electronic paper-free customs environment in the EU. ECS2 extends the exchange of Export Movement data between Office of Export and Office of Exit with new business objects (summary declaration), new processes (Follow-Up, Export Query, Risk Analysis), Security Amendments to the Customs Code as per Reg (EC) No 648/2005, integration with numerous systems, both national and trans-European (BICIS, EORI, RMF, Simplified Declaration Module, other Government Administrations). Nominated for "IT Project of the Year 2009" by Computerworld Bulgaria. Technologies: RUP, UML, J2EE, XML, JSF, Informix, process modeling, BPMS (jBPM). Project size: 13 months, 35 staff peak, 380 p/m effort
3/2008-7/2008	Bulgarian Council of Ministers, Ministry of Education, Ministry of Health, Ministry of Regional Development, Ministry of Labor and Social Policy, Ministry of Internal Affairs, Roma NGOs (for Sirma Solutions); <a href="mailto:I.Kaydzhyska@Government.Bg">I.Kaydzhyska@Government.Bg</a> , state expert, Directorate Ethnic and Demographic Issues	Team Leader (BA and system evaluation), PM	Project PHARE BG 2006/018-164.06.01 "Technical assistance for creating an overall concept, needs analysis, technical documentation and specifications, participation in tender evaluation for a Common Monitoring System for project BG 2006/018-343.01.02 Improving the status and integration of ethnic minorities with special focus on Roma". Evaluation of existing systems, beneficiary interviews, system concept, feasibility study, needs analysis, business specifications, UML modeling, hardware and software specifications, market analysis and tender documentation preparation. Technologies: Enterprise Architecture, OLAP, statistical indicators, reporting and charting toolkits, GIS and mapping, project/grant management, portals, collaboration, web content management.
5/2007-1/2008	Bulgarian Customs Administration (for Sirma Solutions and IBM Bulgaria); <a href="mailto:Stoyan.Ivanov@customs.bg">Stoyan.Ivanov@customs.bg</a> , IT Head RMD Burgas and PM; <a href="mailto:Teodor.Martev@customs.bg">Teodor.Martev@customs.bg</a> , PM	Sub-team Lead, Business Process Modeling	Projects in the Customs area involving BICIS and Export Control System. Team lead for the Lotus Forms part of the user interface. Participate in project planning, system architecture & design, team leading and coordination. Technologies: Websphere Process Server, Websphere Portal, Lotus Forms; Rational Portfolio Manager, Rational ClearCase, Rational ClearQuest, Rational Software Architect.

From-To	Company & Reference Person	Role	Description
1/2007-4/2007	Romanian Ministry of Public Finance (MoPF) and National Customs Administration (RNCA) (for Sirma Solutions and ACE); <a href="mailto:Adrian.Popescu@mfinante.ro">Adrian.Popescu@mfinante.ro</a> , General Director MoPF IT; Adrian Costin, <a href="mailto:acostin@customs.ro">acostin@customs.ro</a> , IT director RNCA	Independent software expert: evaluation of existing systems, tender dossier, specification of Business Process Management and Software Architecture	Technical assistance for project elaboration and preparation of tender dossiers for all Phare 2005 projects of MoPF DGIT and RNCA IT department, amounting to 40MEUR. Topics covered: development of internet portal forms for electronic submission by taxpayers, Adobe Intelligent Forms, centralization and migration of core MoPF applications from Oracle Forms 6 to internet version (including Human Resources management and Fiscal/Financial Audit), intranet portal and collaboration system based on IBM WebSphere Portal and Workplace, central Document Management System with archival/storage and disposal based on DB2 Content Manager and Tivoli Storage Manager, deployment of Identity Management and user provisioning from HR system, IT Security policies and procedures. Improvements to the inter-operation between MoPF and RNCA including unification of data models; technology migration for RNCA including platform upgrades and migration from ASYCUDA++ to ASYCUDA WORLD web-based version. EMCS2 (EU TAXUD Excise Movement Control System phase 2), National Excise Application covering registration/authorization of tax warehouses and excise traders, national and international movement of excise goods. Development of specifications for hardware and software supply.
10/2006	Unicredit/Bank Austria/HVB (Bulbank/Biochim/Hebros) (for Sirma Solutions); <a href="mailto:Kristin.Krumov@mail.bg">Kristin.Krumov@mail.bg</a> , Head of IT (former)	PM consultant	PM Consulting for triple bank merger project. Provided PM consulting in the Infrastructure and System Integration workstream of the IT Cluster. Specific areas (sub-projects) addressed include: Data Center establishment (IBM hardware, AIX, Oracle Enterprise and RAC for core and satellite bank systems), physical, electrical and VAC; Network & Telecommunications (nation-wide network topology and design), Distributed Environment (establishing Active Directory, Windows domains and common services such as ), System Integration (SOA approaches for integrating the core banking system FlexCube with 25 satellite systems), Security and User Profiling (recommended the use of an Identity Management solution), Service Management (ITIL-based, SLAs, Service Model and Catalog, Mercury monitoring tools), Historic Archiving and Retention. Technologies used: Microsoft Project, Microsoft Project Server, Inserted sub-projects, web progress and status reporting, weekly workstream status reports, plan development, coaching individual Project Managers, review and recommendations for Enterprise Architecture and SOA-based Enterprise Integration approaches.
3/2006-12/2006	BNP Paribas Personal Finance (formerly JetFinance) (for Sirma Solutions); <a href="mailto:teodor.yantchev@jetfinanceintl.com">teodor.yantchev@jetfinanceintl.com</a> , IT director	Lead business/process analyst, project manager	Development of ERP System "JETIX". The system automates most business processes in the largest consumer credit company in the country. Includes credit application processing, scoring, credit administration and dossier management, mailing, risk management, collection, bank clearing, installment (payment) matching, accounting, integration with Maconomy, etc. System supports about 100 different business roles (positions). Duties: business analyst, project manager, UML design, business process modeling. Technologies: UML, RUP, SOA, SQL Server 2005, SQL Analysis and Reporting Services, MS.NET 2.0, C#, Windows Workflow Foundation (BPM).
03/2006-10/2006	Bulgarian Customs Administration (for Sirma Solutions for IBF); <a href="mailto:Krassimir.Nikolov@customs.bg">Krassimir.Nikolov@customs.bg</a> , Deputy Director General BCA	Independent software expert and Team leader	Technical Assistance for finalization of Terms of Reference for PHARE project "Extension of Bulgarian Integrated Customs Information System (BICIS) functionality" (6.3MEUR) and participation in the respective tender evaluation. Beremka 12 BG-PAO-FWC-BIS. Serving as senior international software expert (independent evaluator) and team leader. Technologies: SOA, J2EE, BPM, RUP, Rational Rose.



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11/2005, 3/2005	Umicore, Energy sector executives (for Sirma Solutions); <a href="mailto:Dimitar.Angelov@umicore.com">Dimitar.Angelov@umicore.com</a> , Investment Projects director	Project Management trainer	PM training to the staff of Investment Projects department of Umicore (Aurubis) (18 people, 4-day course) and Energy sector executives (15 people, 3-day course). Followed PMBOK, covered Project Management Context, Processes, Integration Management, Scope Management, Time Management, Cost Management, Quality Management, Human Resource Management, Project Teams, Communications Management, Risk Management, Procurement Management, Developing a WBS, Estimating, Scheduling, Executing and Controlling Processes, Integrated Change Control. Trainee management, certificates.
11/2004-7/2005	Bulgarian Patent Office, Bulgarian Customs Agency, Ministry of Culture, Ministry of the Interior and Ministry of Justice (for Sirma Solutions); Boyko Philipov, <a href="mailto:bphilipov@bpo.bg">bphilipov@bpo.bg</a> , IT director BPO	Enterprise architect, Project manager	PHARE project "National Intellectual Properties Information Exchange System" (NIPIES). Inter-government system for information exchange, collaboration and dissemination that integrates Intellectual Property (IP) descriptions across all government departments dealing with IP issues. The system is part of Bulgaria's obligations for ascension to the European Union. Developed technical offer, performed business analysis with stakeholders from various government departments, organized staff education and certification, managed the project Technologies: UML, RUP, sophisticated software architecture based on IBM products, including Business Integration Server, WebSphere Portal and DB2 Content Manager.
11/2004-7/2005	Prosecutors Office of Bulgaria (for Sirma Solutions, Acsior, Rila Solutions); Georgi Bonchev, <a href="mailto:gbonchev@prb.bg">gbonchev@prb.bg</a> , IT Director POB	System architect, Project manager	PHARE project "Unified Information System" (UIS) for POB, a system that handles all aspects of prosecutor and investigator case management. UIS enhancements: 1. Module for communication between UIS and the national Unified Information System for Combating organized Crime (UISCC); 2. Enhancements to the user interface and document generation modules to enable more convenient and better integrated use of the system. 3. Migration of the system (database and web servers) from Windows to Enterprise Linux. These enhancements enabled the nation-wide deployment and acceptance of the UIS system, and integrated it with the national UISCC system, both of which improve the organizational efficiency of POB and enhance its crime-fighting abilities. Responsibilities: developed technical offer, managed the project and consortium relations, managed technical architecture, performed business modeling. Technologies: UML, RUP, Oracle 10g, Oracle Application Server, ARIS modeling, J2EE, Windows 2000, Enterprise Linux
1/2005-3/2005	Ministry of Education and Science (for Sirma Solutions); Albena Vutsova, <a href="mailto:a.vutsova@minedu.government.bg">a.vutsova@minedu.government.bg</a> , Director, Scientific research and projects	Project manager	Current Research Information System (CRIS) and Information System for Management of Scientific Research (ISMSR). CRIS is the Scientific portal of Bulgaria: it manages data about all national and international research projects, scientific organizations and researchers, as well as research results such as patents, publications and products. ISMSR manages public funding, review and selection of research projects, execution and monitoring of research projects. The two systems are of vital importance for invigorating and publicizing scientific research in Bulgaria. Based on the Common European Research Information Format (CERIF) to facilitate exchange with other European research information systems. Initiated the project, managed during inception phase
5/2004-12/2004	World Bank (for Sirma Solutions); Kremena Gocheva, <a href="mailto:infom@bccr.bg">infom@bccr.bg</a> , TTFSE coordinator	Business/ process analyst, architect	Trade and Transport Facilitation in the South-Eastern Europe website ( <a href="http://www.ttfse.org">www.ttfse.org</a> ): Business/process analysis, system architecture and design. The project involves enhancements to site functionality, content, administrative functions, and the Route Planner GIS application.
7/2003-1/2004	Sirma Solutions; <a href="mailto:Tsvetan.Alexiev@sirma.bg">Tsvetan.Alexiev@sirma.bg</a> , CEO	Enterprise architect, Business analyst	Business Requirements Analysis for the information needs of several business IT systems, including: Levski Spartak Insurance Company business operation system, Ministry of Defense "Rest and Recreation" Executive Agency reservation system, EuroLion consumer credit management system. Technologies: stakeholder interviews, Zachman framework analysis, business analysis, RequisitePro

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2/2003-7/2003:	SEP Bulgaria	Architecture consultant	Architectural consulting for Mobile Payments (MPAY), a system to pay for goods and services using mobile phones for Bulgaria. Devised and described the high-level mPay architecture, considered security aspects of the system. Technologies: J2EE, XML/XSL, UML, RUP, business analysis, use cases, Java 1.4, EJB, RMI, JSP, JME, Jiraffe (Sirma framework), Weblogic application server, WebSphere application server, Tomcat application Server, MS SQL Server, Oracle 10g, mobile protocols: USSD, SMS;
3-4/2003	Transport Canada; Jonathan Rose, <a href="mailto:rosej@tc.gc.ca">rosej@tc.gc.ca</a> , Senior Analyst, Risk Evaluation Dangerous Goods	System architect, Business analyst	Transport Dangerous Goods Online Accident Reporting (TDG OAR), system for web-based reporting of accidents involving dangerous goods, part of the Government On-Line initiative at Transport Canada. Evaluated business processes, conducted domain expert interviews, modeled the business domain, developed a model of inclusion for Means Of Containment and corresponding diagrams. Developed database model in Erwin, generated physical schema for Oracle 8i. Developed online help from the user guide, linked help in the system. Selected and managed the team. Developed the project plan, delivered status updates and bi-weekly reports to the project authority, managed the overall progress of the project. Technologies: business modeling based on UML, GOL CLF, ASP, VBScript, VB COM, ADO, Oracle 8i, Erwin 3.5, Microsoft Word, HtmlTidy.
12/2001-9/2002	Elections Canada (for WorkLogic Corp); <a href="mailto:Phil.Hopkins@Elections.ca">Phil.Hopkins@Elections.ca</a> , systems support	PM, business analyst	The ECSN1 & ECSN2 (Elections Canada Support Network) systems ran the Canadian Federal Elections in 2000, 2002, 2006, 2008. Performed requirements gathering and analysis, wrote the system specification and project proposal, developed project plan, managed and tracked the project, redesigned database schema for better manageability and speed, participated in load-testing, optimization and hardware sizing. Technologies: ASP, VBScript, ADO, Oracle 8i, Erwin 4.0.
6/1999-11/2002	Library of Parliament (for WorkLogic Corp); Mike Graham, <a href="mailto:GrahamM@parl.gc.ca">GrahamM@parl.gc.ca</a> , director Information & Documentation	PM, business analyst, integration designer	ParlRef, a core line-of-business Library Reference system. Integrated with: ParlCat (web-enabled catalogue system), WorkLogic Orgvisiion (data about clients and staff), Docuvisiion (documents relating to FAQs). Specified the system (client selection/creation screens, Intranet Online Request System, ParlCat and Docuvisiion integration), gathered and analyzed requirements, managed the project. Technologies: UML, RUP, VBScript, JavaScript, MSSQL 7, ADO, Windows NT Logon.
10/1998-7/2001	Human Resources Development Canada (for WorkLogic Corp)	PM, business analyst	National Occupational Classification (NOC) web site and search engine. Managed the project, specified enhancements, performed ongoing administrative tasks (error log monitoring, watchdog, summarization of traffic reports). Technologies: Oracle 8.0, Netscape Enterprise Server 4, Server-Side JavaScript.
6/1998-10/2001	Human Resources Development Canada (for WorkLogic Corp)	PM, business analyst	Online Data Intranet and Information Network (Odiin), a Grants and Contributions system for the Youth Initiatives Directorate. Specified and managed re-engineering from Borland IntraBuilder and Access to Java and Oracle. Specified and managed system improvements. Technologies: business modeling based on UML, Java, JSP, Servlets, JRun 3.0, Oracle 8i
12/1992-5/1998	Sirma Group	consultant	While doing my PhD, I did various research tasks, strategic consulting, helped develop system architectures and defining project scopes. Transport Canada Briefing Notes (TCBN). Comparative analysis of Object Database Management Systems. Competitive analysis of Document Management Systems and web-based DMS interfaces, developed company positioning regarding DMS.

## Publications

See <https://vladimiralexiev.github.io/my/>. Most publications have abstracts and keywords. Most publications and accompanying presentations are openly available. Statistics as of 2025-07:

Book (author), thesis, conference proceedings (editor)	3
Tech reports, manuals, deliverables, ontologies	43
Conference papers, journal articles	51
Presentations, posters, blog posts	61
<b>TOTAL</b>	<b>158</b>

## Awards and Achievements

- 1997-1998: University of Alberta Dissertation Scholarship.
- 1997: Andrew Stewart Memorial Graduate Prize to present at an academic conference.
- 1995-1996: Killam Memorial Scholarship, University of Alberta.
- 1992-1994: University of Alberta PhD Scholarship
- 1988-1991: Annual Excellence Scholarship, Technical University of Sofia
- 1986: 1<sup>st</sup> Place Winner, Bulgarian National Programming Olympiad