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Dr Philippe MARTIN

Senior Researcher & Software Engineer
Project Leader

Expert in knowledge representation+integration, cooperation systems, Semantic Web services

Current research directions

Design of methodologies, ontologies, languages, techniques and software helping people to search, filter, compare, organize, represent, share and evaluate arbitrarily precise/complex knowledge, ***e.g.***,

- ***methodologies*** (about *normalization, argumentation, evaluation, ...*) enabling people to collaboratively create documents and well organized knowledge bases without having to agree on terminology or beliefs,
- ***languages*** that are *expressive, readable and normalizing* for representing, combining and searching knowledge (Formalized-English, Frame-CGs, For-Links) and for Petri Nets or Activity Diagrams (PNLF),
- ***ontologies*** : (i) one *general ontology* (semantic dictionary of 110,000 categories) voted "candidate for a standard" by the IEEE P1600.1 SUO group on May 12th 2001, (ii) *language ontologies*, e.g., an ontology meta-model for the Object Management Group (OMG), (iii) *domain ontologies* (for learning objects, structured catalogs, health records, … => teaching/learning, commercial/tourism Web sites, …),
- ***software*** : (i) 3 knowledge modeling/sharing/retrieval tools that included the above elements (over 100,000 lines of C++/Lex/Yacc/Javascript/XML/CSS; "Asia-Pacific Oracle IT&T" R&D awards in 1999 and 2001), (ii) other software for 6 private companies during 2.5 years.

Post-doctoral Professional Experience (~13 years; 10 in Australia): research & development (R&D), project management, supervision, teaching

2008 - 2009 **Project leader** at Eurécom (French research institute in telecommunication systems).
Study of (and creation of an ontology on) data protection (needs, techniques, access/usage politics) for the use of RFID tags in the industry. Application to the "PACA-ID Supply Chain" project in collaboration with 7 industrial partners (IBM, France Telecom, Carrefour, ...).

2005 - 2007 **Australian Senior Lecturer** (~ U.S. Associate Professor) at Griffith Uni. (Gold Coast, Australia).
Extension of the knowledge server WebKB-2 to better support e-learning, research, collaboration and tourism Web sites (this research was awarded a "Griffith E-Learning" research grant).
Supervision of a Java course and Java projects. Involvement in the Text Outline Project.
Co-supervision of three PhD students: "Accessing knowledge using ontologies",
"Using ontologies for managing (indexing, querying, re-use, annotation) learning objects",
"Belief function reasoning to decision making under incomplete information".
Teaching of Internet Programming, Workflow Management Systems and Procedural Languages.
Reason for departure: due to the continually decreasing number of I.T. students, my contract was not renewed and many permanent lecturers had to retire early (as in other Australian universities). I also preferred coming back to France.

2004 **Senior Researcher and Developer** at Griffith Uni. and for Biocenturion Systems Pty Ltd.
Design of an hospital database accessible by patients via mobile phones or Web browsers.
Inter-connection of workflow management tools.
Sept.-Nov. 2004: ***Visiting Research Professor*** at the Laboratory for Applied Ontology (Italy).
Design of an ontology to permit the comparison of knowledge management tools.

2001 - 2003 **Senior Research Scientist** and **Leader of the WebKB-2 project** at the Australian's Distributed Systems Technology Center (ex W3C's Australian Office; closed in 2006).
WebKB-2 is the only Web server enabling people to tightly interconnect their knowledge within a unique large consistent knowledge base *without* having to agree on terminology or beliefs.
Works for the OMG and the CGIF&KIF standardization committees of the ISO/IEC JTC1 SC32.
Reason for departure: closure preparation (for financial reasons), 95% of staff members had to leave before March 2004.

1998 - 2000 **Researcher and Developer** at the School of Information Technology, Griffith University.
Completion of the development of WebKB-1, a Web server enabling the storage of knowledge in Web documents and its use for indexing and then retrieving any part of these documents.
May-July 2000: **Visiting Researcher** at the INRIA (French National Institute for Research in Computer Science and Control). Design of ontologies for knowledge sharing in RDF.

1997 **Researcher and Developer** at the University of Adelaide (Australia) and for the DSTO (Australian Defense research dept.). Beginning of WebKB-1, early major Semantic Web tool.

Ph.D., Pre-doctoral Professional Experience (~ 2 years) and Education – in France

1993 - 1996 **Ph.D. in Information Technology (I.T.) and Artificial Intelligence (A.I.)** at the INRIA research center (ACACIA project) and University of Nice - Sophia Antipolis.
Thesis (supervisor: Rose Dieng-Kuntz): *Knowledge Acquisition and Information Retrieval using Conceptual Graphs and Structured Documents.*
Design of CGKAT, tool for knowledge acquisition and precision-oriented information retrieval.
January-March 1993: research on *knowledge extraction from regulatory texts* at the Australian national research center CSIRO, Division of Information Technology.

1991 - 1992 **M.Sc. student in I.T. and A.I.** at ESSI (engineer+D.E.A.; Polytech' Nice - Sophia Antipolis).
Summer 1992: design of a knowledge graph editor in Lisp (4000 lines) and Aida/Masai.
Summer 1991: design of an object-oriented drawing editor for TRACE Pty Ltd.

1990 **Software developer** at OMI Pty Ltd. Management in SQL+C of subvention allocation tasks.

1986 - 1989 **B.Sc. student in Software+Hardware Engineering (system+accounting management)** at the University (I.U.T.) of Aix en Provence and then at ISAR (now "Polytech' Grenoble").
Summer 1989: extension of a "minitel" server for LEM Informatique Pty Ltd.
Summer 1988: re-engineering of a Petri Net software for CJB Automation Pty Ltd.
Summer 1986: internship in data reporting using Lotus and Basic at Thomson-CSF Pty Ltd.

Languages and Computer Skills

Languages: French (mother tongue), English (fluent; TOEFL; IELTS; working in Australia since 1997), Spanish (learnt during 4 years in high school), Italian (beginner; 2004), German (beginner; 2007)

Computer skills

Mastered languages	C/C++, Java, Javascript, Lex+Yacc, PHP, SQL, HTML+CSS+AJAX, REST/SOAP
Other known languages	Lisp, Perl, Prolog, Smalltalk, SML, ADA, Pascal, VBscript, Fortran, Cobol, Lotus
Mastered DBMS	FastDB/Gigabase (OODBMS), PostgreSQL, MySQL, Microsoft Access
Knowledge modeling	*Methodologies:* KADS, KOD, Ontoclean *Tools:* WebKB, CGKAT, Ontolingua, Ontausaurus, Protégé, Jena, Sesame *Notations:* UML, RDF+OWL, CGLF, CGIF, KIF, KM, N3, micro-formats, Z and those I designed to solve the problems of current notations
Graphic interfacing	Thot/Amaya (structured document editors), Aida+Masai (graphic libraries)
Operating systems	Expert in Unix (Linux, Solaris) and Unix tools (script languages, development tools, Apache Web server, etc.); Windows, VMS, MacOS

Professional references available upon request.

Publications

A synthesis of my main research works is at http://www.phmartin.info/pastResearch.pdf
All my articles below are accessible from http://www.phmartin.info. Those that have a reference prefixed by a star synthesize the technical ideas of my research. A 11 point font is used for the articles which (in my own view) best describe the results of my research. A 9 point font is used for the other articles. My articles published in the LNCS/LNAI proceedings of ICCS conferences are in the "Refereed conference articles" section below even though ICCS "full papers" have been assimilated to journal articles by Griffith Uni. and to book chapters by researchers such as Kalina Bontcheva). I am a member of the ICCS Program Committee since 1997.

My refereed publications can be grouped according to the main research works they are related to.

- **Ontologies:** Martin (1995) and Martin (2003) present two different exploitations, corrections and extensions of the noun-related part of WordNet (plus its loss-less integration with many top-level ontologies) for supporting knowledge representation, sharing and retrieval; Martin & Eboueya (2007a, 2007) presents the core of a semi-formal state of the art for knowledge engineering, which is ultimately intended to be sufficiently organized for researchers to contribute for precisely comparing their tools or theories while avoiding redundancies.
  Notations, data models or best practices for easing knowledge representation, indexation, normalization, querying and sharing: for languages/practices advocated in WebKB-1/WebKB-2 (Martin & Eklund, 1999, 1999b, 1999c, 2000) (Martin, 2000, 2002), for RDF (Martin & Eklund, 2000a), for UML (Raymond et al., 2003) (Colomb & al., 2005) and for Activity Diagrams (Flater et al., 2007). The three main notations of WebKB-1 and WebKB-2 are For-Links, Frame-CGs and Formalized-English.
- **Cooperation supporting techniques:** KB editing protocols (Martin & Eklund, 2001), algorithms to support scalable knowledge comparisons or the valuation of knowledge contributions and contributors (Martin et al., 2005), update semantics (Eklund et al., 1999), graph/ontology mapping techniques (Dieng et al. 1994) (Niwattanakul et al., 2007).
- **Knowledge sharing and retrieval within and between KBs:** general synthesis (Martin et al., 2006) or with some focus on e-learning (Martin et al., 2007) (Martin & Eboueya, 2008) or annotations (Martin, 2002a). ***Application to e-learning***: (Jones et al., 2007) (Eboueya et al., 2006) (Martin, 2008, 2008a, 2009) (Niwattanakul et al., 2007b).
- **Knowledge sharing and retrieval on the Web:** comparisons (Martin & Eklund, 2000a, 2002) (Martin, 2003a).
- **Knowledge indexation/querying/combination techniques:** within Web documents (Martin, 1997) (Eklund et al., 1998), application to the knowledge-based reasoning test-bed problem Sisyphus-I (Martin & Eklund, 1999a).
- **Combinations and extensions of structured/hypertext document techniques and knowledge representation/acquisition techniques:** (Martin, 1995a, 1995b, 1996, 1997a) (Martin & Alpay, 1996).

Synthesis and integration of explanatory techniques in a knowledge acquisition methodology: (Martin, 1993, 1993a, 1994).

Refereed journal articles

1. Martin Ph. (2009). *Use of Semantic Networks as Learning Material and Evaluation of the Approach by Students*. International Journal of Human and Social Sciences (IJHSS; ISSN 2070-3783), Vol. 3, issue of Winter 2009, pp. 16-23.

2. Niwattanakul S., Martin Ph., Eboueya M. & Khaimook K. (2007). *Learning Object Mediation System based on an Ontology Model.* E-Learning special issues of the International Journal of the Computer, the Internet and Management (IJCIM), Vol. 15, No. SP3 (pp. 28.1-28.6; ISSN: 0858-7027), Sept.-Dec. 2007.

3. Martin Ph. & Eboueya M. (2007). *Sharing and Comparing Information about Knowledge Engineering*. WSEAS Transactions on Information Science and Applications, Issue 5, Volume 4 (pp. 1089-1096; ISSN: 1790-0832), May 2007.
   Summary. This article shows the interest of high-level, general and intuitive knowledge representation languages for indexing the content of Web documents and representing knowledge. This article compares the use of such languages with the use of micro-formats, languages with low-level models, or XML-based notations via graphical interfaces. It is significant because it summarizes some languages and features of WebKB-1 that current Semantic Web tools have not yet been replicated but are on the way to integrate.

4. Martin Ph. & Eklund P. (2000a). *Knowledge Indexation and Retrieval and the Word Wide Web.* IEEE Intelligent Systems, special issue "Knowledge Management and Knowledge Distribution over the Internet", pp. 18-25, May/June 2000.

5. * Martin Ph. & Eklund P. (1999b). *Embedding Knowledge in Web Documents.* Special issue of "Computer Networks, The International Journal of Computer and Telecommunications Networking", Vol. 31 (11-16), pp.1403-1419, February 1999.
   Summary. This article shows the interest of high-level, general and intuitive knowledge representation languages for indexing the content of Web documents and representing knowledge. This article compares the use of such languages with the use of micro-formats, languages with low-level models, or XML-based notations via graphical interfaces. It is significant because it summarizes some languages and features of WebKB-1 that current Semantic Web tools have not yet been replicated but are on the way to integrate.

Refereed book chapters (not "invited" book chapters)

1. Martin Ph. & Eboueya M. (2008). *For the ultimate accessibility and re-usability*. Chapter XXIX (14 pages) of the Handbook of Research on Learning Design and Learning Objects: Issues, Applications and Technologies, IGI Global, ISBN: 978-1-59904-861-1, July 14, 2008.
   Summary. This article summarizes the approach and techniques used in WebKB-2 to help knowledge sharing and retrieval and argues on (i) the advantages for the medium and long term to use this approach, and (ii) the possibility for this approach to be really used by researchers, lecturers and students for collaboration or learning purposes. This article is significant because it is a recent and not too technical summary/analysis of the approach and techniques used in WebKB-2.
2. Martin Ph. (2003a). *Knowledge Representation, Sharing and Retrieval on the Web.* Chapter 12 of a book titled "Web Intelligence" (Springer; editors: N. Zhong, J. Liu, Y. Yao; pp. 263-297; Web Intelligence Consortium's book; ISBN 3-540-44384-3), January 2003.

Refereed international conference articles

1. Flater D., Martin Ph. & Crane M. (2009). *Rendering UML Activity Diagrams as Human-Readable Text.* To be published in the proceedings of IKE 2009, international conference on Information and Knowledge Engineering, Las Vegas, USA, July 13-16, 2009.
2. Martin Ph. (2008). *Use of Semantic Networks as Learning Material and Evaluation of the Approach by Students.* Proceedings of OLDE 2008 (article #74 of the Volume 31 of the "World Academy of Science, Engineering and Technology" proceedings, pp. 429-438), International Conference on Open Learning and Distance Education, Vienna, Austria, August 13-15, 2008.
3. Martin Ph. (2008a). *Semantic Networks to Support Learning.* Proceedings of ICCS 2008 (ISSN 1613-0073, online CEUR-WS.org/Vol-1/pmartin.pdf), 16th International Conference on Conceptual Structures, Toulouse, France, July 7-11, 2008.
4. Niwattanakul S., Martin Ph., Eboueya M. & Khaimook K. (2007). *Ontology Mapping based on Similarity Measure and Fuzzy Logic*. Proceedings of E-learn 2007, AACE Conference on E-learning in Corporate, Government, Healthcare, & Higher Education, Quebec City, Canada, October 15-19, 2007.
5. Martin Ph., Jo J. & Jones V. (2007). *Cooperatively updated knowledge bases as an optimal medium to learn, publish, evaluate and collaborate*. ICUT 2007 (Proceedings B, pp. 875-885), 1st International Conference of Ubiquitous Information Technology, Dubai, February 12-14, 2007.
6. Jones V, Jo J. & Martin Ph. (2007). *Future Schools and How Technology can be used to support Millennial and Generation-Z Students*. ICUT 2007 (Proceedings B, pp. 886-891), 1st International Conference of Ubiquitous Information Technology, Dubai, February 12-14, 2007.
7. Martin Ph. & Eboueya M. (2007a). *Toward a Cooperatively Built Ontology of Knowledge Engineering*. Electronic proceedings of CEA 2007 (Computer Engineering and Applications), WSEAS (World Scientific and Engineering Academy and Society) Conference on Computer Engineering and Applications, Gold Coast, Australia, January 17-19, 2007.
8. Martin Ph., Eboueya M., Blumenstein M. & Deer P. (2006). *A Network of Semantically Structured Wikipedia to Bind Information*. Proceedings of E-learn 2006 (pp. 1684-1702), AACE Conference on E-learning in Corporate, Government, Healthcare, & Higher Education, Honolulu, Hawaii, October 13-17, 2006.
9. Martin Ph., Eboueya M., Jo J. & Uden L. (2006). *Between too informal and too formal*. Proceedings of KMO 2006, International Conference on Knowledge Management in Organizations (UM FERI; editors: M. Hericko, A. ZivKovic; pp. 38-47; ISBN: 86-435-0780-6), Maribor, Slovenia, June 13-14, 2006.
10. Eboueya M., Lillis D., Jo J., Cranitch G. & Martin Ph. (2006). *Mobile Active Participative Learning Environments for the 21st Century Classroom: The MAPLE Project*. Proceedings of the 2nd EUI-Net conference on "European Models of Synergy between Teaching and Research in Higher Education" (pp. 155-158; EUI-Net is the International Excellence Reserve's European University-Industry Network), Tallinn, Estonia, May 3-6, 2006.
11. * Martin Ph., Blumenstein M. & Deer P. (2005). *Toward cooperatively-built knowledge repositories*. Proceedings of ICCS 2005, 13th International Conference on Conceptual Structures (Springer, LNAI 3596, pp. 411-424), Kassel, Germany, July18-22, 2005.
    Summary. This article presents various original elements needed to support the cooperative building of formal/semi-formal knowledge repositories, such as (i) "structured discussions", with a template algorithm to assign values to contributions and credits to contributors, (ii) ontological elements to guide and normalize the construction of knowledge repositories about knowledge management tools, and (iii) an approach to permit a scalable display of object comparisons. This article is significant because it is a technical summary of various techniques that I later refined.
    At ICCS 2005, I organised the "Semi-formal Summaries" workshop and gave a talk at the "CG tools" workshop.
12. * Martin Ph. (2003). *Correction and Extension of WordNet 1.7*. Proceedings of ICCS 2003, 11th International Conference on Conceptual Structures (Springer, LNAI 2746, pp. 160-173), Dresden, Germany, July 21-25, 2003.
    Summary. This article presents my transformation of the noun-related part of WordNet into a genuine "lexical ontology" with short intuitive identifiers - and its loss-less integration with various top-level ontologies - to support knowledge representation, sharing and retrieval within a knowledge base or on the Web. This article is significant because it provides guidelines for creating ontologies usable for "general" knowledge representation and highlights how difficult this task remains.

13. * Martin Ph. (2002). *Knowledge representation in CGLF, CGIF, KIF, Frame-CG and Formalized-English.* Proceedings of ICCS 2002, 10th International Conference on Conceptual Structures (Springer, LNAI 2393, pp. 77-91), Borovets, Bulgaria, July 15-19, 2002.

14. Martin Ph. & Eklund P. (2002). *Manageable Approaches to the Semantic Web.* "Practice & Experience" alternate track of WWW 2002, 11th International World Wide Web Conference, Honolulu, Hawaii, USA, May 7-11, 2002.

15. * Martin Ph. & Eklund P. (2001). *Large-scale cooperatively-built heterogeneous KBs.* Proceedings of ICCS 2001, 9th International Conference on Conceptual Structures (Springer, LNAI 2120, pp. 231-244), Stanford University, California, USA, July 30 to August 3, 2001.

16. Martin Ph. & Eklund P. (2000). *Conventions for Knowledge Representation via RDF.* Proceedings of WebNet 2000 (AACE, isbn:1-880094-40-1), San Antonio, Texas, November 2000.

17. Martin Ph. (2000). *Conventions and Notations for Knowledge Representation and Retrieval.* Proceedings of ICCS 2000, 8th International Conference on Conceptual Structures (Springer, LNAI 1867, pp. 41-54; electronically published on 1/1/2007), Darmstadt, Germany, August 14-18, 2000.

18. Martin Ph. & Eklund P. (1999). *Embedding Knowledge in Web Documents: CGs versus XML-based Metadata Languages.* Proceedings of ICCS 1999, 7th International Conference on Conceptual Structures (Springer, LNAI 1640, pp. 230-246), Blacksburg, VA, USA, July 12-15, 1999.

19. Martin Ph. & Eklund P. (1999a). *WebKB and the Sisyphus-I problem.* Proceedings of ICCS 1999 (Springer, LNAI 1640, pp. 315-333), Blacksburg, Virginia, USA, July 12-15, 1999.

20. * Martin Ph. & Eklund P. (1999b). *Embedding Knowledge in Web Documents.* Proceedings of WWW8 (pp. 324-341), 8th International World Wide Web Conference, Toronto, Canada, May 11-14, 1999.
This article has also been published as a journal article and hence is also listed above.

21. Eklund P. & Martin Ph. (1998). *WWW Indexation and Document Navigation Using Conceptual Structures.* Proceedings of ICIPS 1998, IEEE Int'l Conference on Intelligent Processing Systems (IEEE Press, pp. 217-221) Australia, August 4-7, 1998.

22. Martin Ph. (1997). *The WebKB set of tools: a common scheme for shared WWW Annotations, shared knowledge bases and information retrieval.* Proceedings of ICCS 1997, 5th International Conference on Conceptual Structures (Springer, LNAI 1257, pp. 585-588), Seattle, USA, August 4-8, 1997.

23. Martin Ph. (1997a). *CGKAT: a Knowledge Acquisition Tool and an Information Retrieval Tool Using Structured Documents and Ontologies.* Proceedings of ICCS 1997 (Springer, LNAI 1257, pp. 581-584), Seattle, USA, August 4-8, 1997.

24. * Martin Ph. & Alpay L. (1996). *Conceptual Structures and Structured Documents.* Proceedings of ICCS 1996, 4th International Conference on Conceptual Structures (Springer, LNAI 1115, pp. 145-159), Sydney, Australia, August 19-22, 1996.

25. Martin Ph. (1995a). *Links between Electronic Documents and a Knowledge Base of Conceptual Graphs.* Supplementary proceedings of ICCS 1995, 3rd International Conference on Conceptual Structures (Springer, LNAI 954, pp. 112-125), University of California, Santa Cruz, August 14-18, 1995.

26. * Martin Ph. (1993). *A KADS refinement for Explanatory Knowledge Extraction and Modeling.* Proceedings of AI 1993, 6th Australian Joint Conference on Artificial Intelligence (edited by "World Scientific, Singapore"), Melbourne, Australia, November 16-19, 1993.

Refereed national conference articles

1. Martin Ph. (1993a). *Adaptation de KADS pour la construction de Systèmes à Base de Connaissances explicatif* (in English: "Comparison of conceptual graphs in the context of knowledge acquisition from multiple experts"). Proceedings of JAVA 1993 ("4th Journées Acquisition, Validation et Apprentissage"), Saint-Raphaël, France, March 1993.

Refereed international workshop articles

1. Martin Ph. (2002a). *How WebKB could contribute to PORT.* Proceedings of PORT 2002, 2nd PORT workshop, first day of ICCS 2002.
2. Eklund P., Becker P. & Martin Ph. (1999). *Update Semantics for Cooperative Ontologies.* Position statement at SWWS 1999 (Semantic Web Workshop).
3. Martin Ph. & Eklund P. (1999c). *A Key for Enhanced Hypertext Functionality and Virtual Documents: Knowledge.* Proceedings of the Workshop "Virtual Documents, Hypertext Functionality and the Web" (technical report UBLCS-99-10, pp. 35-40) at WWW8, May 11, 1999.
4. Martin Ph. (1995). *Using the WordNet Concept Catalog and a Relation Hierarchy for Knowledge Acquisition.* Proceedings of Peirce 1995, 4th International Workshop on Peirce (pp. 36-47), University of California, Santa Cruz, August 18, 1995.
5. Martin Ph. (1995b). *Knowledge Acquisition Using Documents, Conceptual Graphs and a Semantically Structured Dictionary.* Proceedings of KAW 1995, 9th International Knowledge Acquisition for Knowledge-Based Systems Workshop (pp. 1-19), Banff, Canada, February 26 - March 2, 1995.

Refereed national workshop articles

1. Dieng R., Labidi S., Lapalut S. & Martin Ph. (1994). *Comparaison de graphes conceptuels dans le cadre de l'acquisition des connaissances à partir de multiples experts* (in English: "Comparison of conceptual graphs in the context of knowledge acquisition from multiple experts"). Proceedings of GC 1994, LIRMM, Montpellier, France, March 1994.

Thesis (Ph.D., M.Sc.)

1. Martin Ph. (1996). *Exploitation de graphes conceptuels et de documents structurés et hypertextes pour l'acquisition de connaissances et la recherche d'information* (in English: "Knowledge Acquisition and Information Retrieval using Conceptual Graphs and Structured Documents"). Ph.D. thesis (378 pages), University of Nice - Sophia Antipolis, France, October 14, 1996.
   Summary. Some usual tasks in designing a knowledge-based system are document information retrieval/representation (e.g., expert interview re-transcriptions), document creation/manipulation (e.g., technical documentation) and knowledge retrieval/handling (e.g., for validating the knowledge base). To help the knowledge engineer perform these tasks, I designed and implemented CGKAT, a knowledge acquisition tool which combines (i) the advanced document structuring/handling techniques proposed by the structured document editor Thot, and (ii) the advanced knowledge representation/organization techniques enabled through the Conceptual Graph formalism. Thus, these knowledge representations can be stored, retrieved and handled with the editor Thot and CGKAT can exploit them to allow the retrieval of document parts indexed by these representations. The user may retrieve knowledge representations or document parts by navigation or conceptual requests. The results of these requests are generated virtual documents (or "views") collecting parts of documents or parts of the knowledge base which are selected on conceptual criteria. This work is likely to be re-used or replicated when XML-based Web browsers with graphic features such as those of Thot will become available (in 2009, this is not yet the case).
   Furthermore, to help the knowledge engineer perform knowledge representation/retrieval, I designed one of the first large general ontology consisting of: (i) common basic relation types (e.g. rhetorical, mereological, spatial and temporal relations); (ii) top-level concept types that we have specialized by the 90,000 concept types of the terminological knowledge base WordNet. I showed how the exploitation of such an ontology by knowledge engineers tends to improve the coherence, the extendibility and the reusability of their knowledge representations. This idea is now well accepted.
2. Martin Ph. (1994). *La méthodologie d'acquisition de connaissances KADS et les explications* (in English: "Extension of the KADS knowledge acquisition methodology to acquire explanatory information").
   M.Sc. thesis, INRIA research report RR 2179 (107 pages), 1994.
   Summary. In 1992, no KA methodology was precise enough to guide a knowledge engineer into acquiring information from sources of expertise (documents, experts) for the KB to be self-explanatory or for the KBS to be able to generate good explanations on its knowledge and reasoning. Thus, the KB or KBS was hard to understand and trust. To solve this problem, this M.Sc. thesis proposed to complement the KADS Conceptual Model with a "model of cooperation expertise" and a "model of communication expertise". The content of these two new models and the relationships that should occur between them were specified. A list of questions to acquire problem solving knowledge and explanatory knowledge related to each type of element of an interpretation model was also provided. To come up with this result, various knowledge acquisition and explanatory techniques used so far were synthesized. The difficulty relied in making that synthesis and instantiating it into the KADS framework. This research can however be used in other KA methodologies.

Documents accepted as materials for standards

1. Raymond K., Martin Ph. & Colomb B. (2003). *Ontology Definition MetaModel.* OMG document ad/03-08-01 (DSTC Initial Submission to the Ontology Definition Metamodel RFP of the Object Management Group), August 18, 2003.
   The four proposals received by the OMG have been merged into:
   Colomb R., Chang D., Kendall E., Boger M., Emery P., Raymond K., Martin Ph., Ye Y., Dutra M., Frankel D., Hart L., Hayes P., McGuinness D. & Garshol L.M. (2005). *Ontology Definition Metamodel.* Third Revised Submission to OMG/RFP_ad/2003-03-40, August 22, 2005.
2. Martin Ph. (2004). *The Multi-Source Ontology (MSO) of WebKB-2*. (A summary and pointers to its content are at http://www.webkb.org/doc/MSO.html). Voted "candidate material for a standard" by the IEEE P1600.1 SUO group on May 12th 2004 (http://suo.ieee.org/email/msg12552.html).

Technical reports

1. Martin Ph. (2009a). *Analyse de la sécurité dans les systèmes RFID* (in English: "Analysis of security techniques in RFID systems"). Chapter 4 (pp. 36-56) and Annex 9.5 (pp. 84-147) of the SP 1.2 confidential report ("Étude Prospective des besoins du Réseau RFID Communautaire") of the PAC-ID project for the DGCIS (ex DGE; Direction Générale de la compétitivité, de l'industrie et des services), January 2000.
   I also contributed to Chapter 3 of the report, the authors of which are: B. Pucci, P. Secondo and F. Boudinet for IBM, P. Martin, R. Molva and T. Strufe for Eurecom, P. Blanc and J. Beauxis for Carrefour, C. Fenzy-Peyre, M. Mouilleron and P. Rodier for Orange Labs.

2. Flater D., Martin Ph. & Crane M. (2007). *Rendering UML Activity Diagrams as Human-Readable Text.* NISTIR report 7469, National Institute of Standards and Technology, Gaithersburg, MD, 2007.
   A slightly updated version of this article will be published in the proceedings of IKE 2009 and hence is also listed above.
3. Matta N. & Martin Ph. (1998). *CGKAT: The User's Reference Manual.* INRIA technical report RT-0220 (116 pages), May 1998.

Other interesting Web documents

1. Martin Ph. (2007). *Supporting Non-automatic But Scalable Knowledge Representation, Sharing and Retrieval.* http://www.webkb.org/doc/slides/x/myWorks.html
   Invited lectures to the Uni. of Hawaii, Hawaii Pacific Uni., Xerox Research Center Europe and DERI Galway.
2. Martin Ph. (2007a). *Knowledge Representation/Translation in RDF+OWL, N3, KIF, UML and the WebKB-2 languages (For-Links, Frame-CG, Formalized English).* http://www.webkb.org/doc/model/comparisons.html
3. Martin Ph. (2006). *Documents related to my Griffith E-Learning Fellowship for Semester 2, 2006.* http://www.webkb.org/doc/papers/GEL06/
4. Martin Ph. (2006b). *Structured discussions & Semantic classification of some resources.* http://www.webkb.org/kb/it/
5. Martin Ph. (2006c). *The WebKB languages.* http://www.webkb.org/doc/languages/
6. Martin Ph. (2005). *Services on the Sunshine Coast.* http://www.webkb.org/kb/SC/
7. Martin Ph. (2004b). *Discussion on recommendations to increase knowledge re-use* http://www.webkb.org/doc/conventions.html
8. Martin Ph. (2003b). *Integration of WordNet 1.7 in WebKB-2.* http://www.webkb.org/doc/wn/
9. Martin Ph. (2002b). *Examples of Executable Knowledge Files.* http://www.webkb.org/kb/