



Directory of Canada's language technology industry

**Presented to the
Language Technologies Research Centre**

**Prepared by Infolog Inc.
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TABLE OF CONTENTS

DIRECTORY OF CANADA’S LANGUAGE TECHNOLOGY INDUSTRY	1
PRESENTED BY: INFOLOG INC.	1
JANUARY 2006 DIRECTORY OF CANADA’S LANGUAGE TECHNOLOGY INDUSTRY, 2006.....	1
DIRECTORY OF CANADA’S LANGUAGE TECHNOLOGY INDUSTRY, 2006 . ERROR! BOOKMARK NOT DEFINED.	
FOREWORD.....	6
LANGUAGE TRAINING	7
Language training technology companies	8
AutoSkill International	8
Charismagics	9
Druide informatique.....	10
Elam, E-Langues.....	11
Entreprises Didactik.....	12
EOA Scientific Systems	13
Gemini Performance Solutions.....	14
Greenwood Canada.....	15
Inaam Alvi Technologies.....	16
Innova Multimedia.....	17
Les cours d’angl@is virtuels inc	18
Mayet Information Systems.....	19
Quillsoft Ltd.	20
Recombo	21
Technolinks Incorporated.....	22
TTG Systems	23
Language training technology research centres.....	24
Alberta Distance Learning Centre.....	24
Athabasca University – Research Centre.....	25
Canadian Language & Literacy Research Network	26
Laboratoire en informatique cognitive et environnements de formation (Télé-Université) (LICEF).....	27
St. Mary’s University, Liberated Learning	28
CONTENT MANAGEMENT.....	29
Content management technology companies	30

ACS Software Canada Ltd.....	30
Adapsys L.P.....	31
Agency of General Information Retrieval (AGIR).....	32
AmikaNow! Corporation.....	33
Apostrophe Software Inc.....	34
Arikus Inc.....	35
Aruna Software.....	36
Axonwave Software Inc.....	37
Blast Radius.....	39
Casebank Technologies.....	40
Cedrom-SNI inc.....	41
CGK Technologies Group.....	42
Chamblon Systems.....	43
Cogilex Natural Language Processing.....	44
Cognos Incorporated.....	45
Convera Canada.....	46
Copernic Technologies, Inc.....	47
Coredge Software Inc.....	48
Coveo Solutions Inc.....	49
Delphes Technologies.....	50
Documens.....	51
EB Data.....	52
Eloqua Corporation.....	53
Ever America.....	54
Front Logic.....	55
Hummingbird.....	56
Ibertron Technologies.....	57
Idilia.....	58
inSystems Corporation.....	59
Interfacing Technologies Corporation.....	60
Irosoft Inc.....	61
iUpload.....	62
Ixiasoft.....	63
Knexa.....	64
Knowledge4You Corporation.....	65
Macadamian Software Labs.....	66
Marqui Canada.....	67
Mio Business Intelligence.....	68
Nomino Technologies.....	69
NStein Technologies.....	70
Open Text Corp.....	71
Pathix ASP.....	72
Powervision Software Inc.....	73
ReadPlease.....	74
Safe Software Inc.....	75
Searchlight Systems.....	76
Sonic Boomerang Inc.....	77
Stilo Content Engineering.....	78
Storageplex Limited.....	79
Tower Software.....	80
Tradebytes Data Corp.....	81
Vircom Inc.....	82
Visiphor.....	83
Zantaz.....	84
Zi Corporation.....	85

Content management technology research centres.....	86
Centre for Pattern Recognition and Machine Intelligence (Concordia University) (CENPARMI).....	86
Centre de recherche informatique de Montréal (CRIM).....	87
Dalhousie Natural Language Processing Group	89
Database Research Group, Department of Computing Science, University of Alberta.....	90
Knowledge Acquisition and Machine Learning Research Group, University of Ottawa	91
Laboratoire d'analyse cognitive de l'information, Équipe lecture et analyse de textes assistée par ordinateur (LANCI).....	92
Laboratoire de recherche sur les Asymétries d'interfaces (LAD).....	93
Observatoire de linguistique Sens-Texte (OLST).....	95
Stat-NLP Group (University of Waterloo)	96

TRANSLATION 97

Translation technology companies.....	98
Aboriginal Languages of Manitoba Inc.....	98
BabelFish.....	99
Beetext	100
BridgeTerm, a division of InfoGraffiti Inc.	101
Commport Communications International, inc.....	102
Edit inc.	103
KCSL INC.....	104
MultiCorpora R&D Inc.	105
Multilingual E-Data Solutions	106
Orca.....	107
Progiciels BPI.....	108
Roler Data Transfer Services Inc.	109
Socatra, Société canadienne de traduction assistée inc.....	110
Terminotix	111
Translation technology research centres.....	112
Centre interdisciplinaire de recherches sur les activités langagières CIRAL.....	112
Clac Labs: Computational Linguistics at Concordia	113
Department of Linguistics, Simon Fraser University.....	114
Laboratoire RALI.....	115

SPEECH PROCESSING 117

Speech processing technology companies.....	118
Adacel	118
Apparent Networks	119
Audisoft Technologies	120
Avaz Innovations	121
BCE Elix	122
Codebaby.....	123
Computer-Talk.....	124
Diaphonics.....	125
Excendia.....	126
McGill Network and Communications Services.....	127
Nü Echo Inc.....	128
Nuance Communications, Inc.....	129
Openface Internet, Inc.	130
Pronexus.....	131
Speech Gadgets.....	132

Speech Technology Research Ltd.	133
Time ICR.....	134
Vestec.....	135
VoiceGate Corporation.....	136
VoiceGenie.....	137
Wavemakers Audio Intelligence.....	138
Voice processing technology research centres.....	139
Signal Processing Oriented Technologies (SPOT) research group	139
INRS-EMT	140
Laboratoire de recherche en multimédia	141
National Centre for Audiology	142

Foreword

This document is the result of a research mandate that the Language Technologies Research Centre (LTRC) awarded to Infolog Inc., a research and communications company. It is a directory that indexes all the private companies, research centres and university centres that conduct research and development work in Canada's language technology industry.

This directory describes the language industry research work currently under way in Canada. The purpose of publishing this information is to create a stronger partnership between the industry's various contributors. Ultimately, this tool will facilitate the actions of the LTRC, the Language Industry Association (AILIA), the National Research Council of Canada (NRC), as well as government stakeholders who are in favour of initiatives in the language industry.

The directory is organized into four sections that correspond to the four sectors of language technology, as identified and classified by the language industry Technology Roadmap¹. The four areas of activity are: language training, content management, speech processing and translation. Each section is divided into two sub-sections so as to differentiate between research companies and research centres.

In this directory, research centres and private companies are described on individual record sheets. These sheets include the necessary civic and electronic contact information, the name of the contact(s), as well as a brief description of any current research projects and the resulting products.

This directory was produced in several stages that were staggered between October 10, 2005 and December 30, 2005. The language industry stakeholders presented in this document were indexed from lists provided by the LTRC, the Office québécois de la langue française, AILIA, the NRC and the Translation Bureau. A data development process that the Infolog Inc. team conducted on the Internet completed these lists. Once the stakeholders were selected, a communiqué itemizing the project's ins and outs was sent to them, along with a blank sheet to fill out. For validation purposes, fifty companies received sheets that the Infolog team had pre-prepared. The sheets from the contributors were written in either French or English. Follow-up was conducted by email or over the phone. Following the December 20, 2005 deadline, the sheets for the companies and research centres included in this document, but who did not follow-up on Infolog's initiatives, were written by researchers using information on the Web sites of the aforementioned associations.

Enjoy your consultation.

¹ For more information about the Technology Roadmap, visit www.ailia.ca.

LANGUAGE TRAINING

The language training industry includes the companies and institutions involved in teaching French and English as second languages, training teaching staff for these two subjects, foreign-language teaching, language assessment and any related services, and improving language skills in relation to a specific domain such as health care or engineering.

Therefore, this section is made up of educational institutions, private companies and research labs that develop tools, software and technological processes whose purpose is to improve language training. The products in question are mostly multimedia language learning software that make thorough use of the Internet and the technological advances in other domains of the language industry such as speech processing and content management. We've noticed that many colleges and universities who offer distance-learning programs run research projects in the language training technology industry.

This directory contains fact sheets that itemize the activities of sixteen companies involved in this area of development. In addition, there are five research laboratories that study the various technologies related to language training. By that very fact, this sector is the third most important in Canada's language technology industry.

Language training technology companies

AutoSkill International

555 Legget Drive, Suite 600, Tower B, Ottawa, Ontario, K2K 2X3

Tel.: (613) 287-0900 Fax: (613) 287-0990

Web site: <http://www.autoskill.com>

Contact: Adrienne Vienneau

Email: adrienne.vienneau@autoskill.com

Products and researches

AutoSkill International Inc. provides proven literacy intervention software tailored to the unique needs and challenges of today's students, educators and school and district administrators. With years of experience delivering educational software based literacy intervention solutions to thousands of schools, AutoSkill is committed to helping educators provide students with the fundamental literacy skills they need to succeed.

AutoSkill® Literacy Intervention Suite: Only AutoSkill provides a single software package that enables elementary, middle, and high school students to build foundation reading and math skills. Using the AutoSkill Literacy Intervention Suite, administrators can implement an effective, consistent literacy strategy using proven technology that can be quickly deployed, easily managed, and scaled across an entire district.

Academy of READING®: The Academy of READING allows struggling students to work independently on problem areas, freeing educators to concentrate their time and effort where they are needed the most. The program helps students build foundation skills in five core areas as defined by the National Reading Panel. Using a three-step intervention methodology, the program delivers a dynamic individualized training experience to each student.

School Report Pack™: The School Report Pack for Academy of READING or Academy of MATH provides powerful reporting capability designed to help school and district administrators manage successful implementations, demonstrate progress during the school year, and substantiate grade-level gains.

SpanishTutor™ Module: The Academy of READING's optional SpanishTutor module lets Spanish-speaking students quickly master foundation reading skills. The module's read-aloud function enables students to gain a better understanding of each task, through features such as student tutorials, motivation and feedback elements, and neutral enunciation.

Charismagics

2205-160 Erskine Ave., Toronto, Ontario, M4P 1Z3

Tel.: (905) 735-5081 Fax:

Web site: <http://www.charismagics.com>

Contact: Dan Kurchak

Email: dan.kurchak@charismagics.com

Products and services

The one-on-one connection, it's the Internet's greatest strength.

Now, with the net's companion ability to link everyone together, it has allowed us to create a powerful learning system – Personal-e.

From early education to adulthood, Personal-e creates a lifelong learning pathway that educators are calling "the future of education".

Druide informatique

Address: 1435 Saint-Alexandre Street, Suite 1040, Montréal, Quebec, H3A 2G4

Tel.: (514) 484-4998 Fax: (514) 484-7709

Web site: <http://www.druide.com>

Contact: Éric Brunelle, President

Email: brunelle@druide.com

Number of positions: 25-50

Product research and development

Antidote – Mainstream French writing assistance software. Antidote includes an advanced grammar checker, a multifunctional dictionary, a thesaurus, a conjugator and a grammar. It is compatible with standard Mac OS and Windows word processing and email software. Marketed throughout French-speaking countries since 1996, Antidote continues to be actively developed.

Druidemestre – A Web-based application project of Antidote's analysis technology. Scheduled to be released in 2006.

Elam, E-Langues

2352 Duvernay Street, Montréal, Quebec, H3J 2X1

Web site: <http://www.elam.qc.ca>

Tel.: (514) 395-1948 Fax: (514) 395-2321

Contact: Paule Grenier

Email: paule@elam.qc.ca

Products and services

Web-based language courses, development of multimedia tools.

Entreprises Didactik

162 André-Chenier Street, Laval, Quebec, H7L 2S6

Tel.: (450) 628-4439

Web site: <http://pages.infinit.net/didactik>

Contact: Robert Minerve

Email: didactik@videotron.ca

Number of positions: 2

Products and researches

Manufacturer and designer of interactive multimedia language learning software. Language courses via Internet Skype telephony.

EOA Scientific Systems

Capt. Spry Center, 10 Kidston Road, Halifax, Nova Scotia, B3R 2J7

Web site: <http://www.eoascientific.com>

Email: rpaul@eoascientific.com

Products and researches

EOA Scientific has been serving the educational community for 15 years. We design, develop and distribute interactive multimedia science software – available on CD and online – as well as VHS and DVD videos. These products are designed for middle school, high school and first year university students, teachers and parents.

Gemini Performance Solutions

2nd floor, 683 10th Street SW, Calgary, Alberta, T2P 5G3

Tel.: (403) 263-8649 Fax: (403) 261-4688

Web site: <http://www.gemini.com>

Contact: Kim Adolphe

Email: kim@gemini.com

Number of positions: 12

Products and services

Gemini is a pioneer in the creation of customized, pedagogically sound eLearning and performance based software solutions. Since 1990, Gemini has acquired the depth of knowledge, expertise, and understanding that has enabled us to create unparalleled, cost-effective, successful eLearning solutions for our clients. Gemini's eLearning solution is targeted at small and large organizations that create internal training programs and want to reduce overhead costs and increase people performance. Gemini offers solutions and expertise that allow our clients to launch eLearning sessions and concentrate their time and resources on the content alone. The technology is proven and ensures that each and every project will be successful, on time, and on budget.

GeMS SWIFT 6.5 offers everything our clients need to create, deliver, sell, manage, track, and continuously improve adaptive eLearning over the Internet, Intranet, or via CD-ROM. Our technologies have been designed to empower our clients to increase their people performance, to decrease their time to market, better satisfy their customers, solve problems, and increase return on investment.

GeMS SWIFT 6.5 is a complete eLearning solution that combines a Learning Management System (GeMS) and an Adaptive Learning Environment (SWIFT). SWIFT is the learner interface that adapts learner content using an Adaptive Testing Algorithm. The SWIFT Adaptive Testing Algorithm is based on years of international research. Gemini recently introduced Stellar, a performance and skills assessment technology that uses performance modelling techniques.

Greenwood Canada

914-6081 No. 3 Road, Richmond, British Columbia, V6Y 2B2

Tel.: (604) 231-8197 Fax: (604) 231-8039

Web site: <http://www.greenwood.ca>

Contact: Patrick Chun, Director

Email: pchun@Greenwood.ca

Number of positions: 6

Products and research projects

Greenwood is specialized in providing quality high school and English-language learning programs. Our particular language focus is on English as a Second Language (ESL) learning programs for Asian students in regions such as Canada, the U.S., Hong Kong, Taiwan, Japan and China.

Greenwood is providing schools with an integrated web-based enterprise system to handle administrative and educational logistics. The intranet administration component allows school administrators to achieve maximum efficiency, with many day-to-day, mundane administrative tasks relegated to the computer system.

The proven computer-assisted multimedia-learning component allows teachers to reduce repetitive chores and, consequently, spend extra quality time with each student for additional guidance and feedback. Multimedia presentation encompasses text, voice, animation, graphics and video integrated in an interactive, coherent learning experience.

Inaam Alvi Technologies

76 Westcroft Drive, Scarborough, Ontario, M1E 3A5

Tel.: (416) 284-2324

Web site: <http://inamalvi.com>

Contact: Mohammad Inam

Email: inam@customer-care.ca

Products and researches

Children's Educational Software - Innovative & Quality
Computer-aided learning software for kids.

Child-friendly software and child Care software are essential components in today's world. Our innovative software products for children provide a rich new learning experience using a multimedia and audio-visual approach that makes learning Urdu and English fun and easy for kids.

Innova Multimedia

P.O. Box 20020, 35 Carolina Avenue, Stephenville, Newfoundland, A2N 3P8

E-mail: innova@innovamultimedia.com

Tel.: (709) 643-3026 Fax: (709) 643-3126

Contact: Joe Wiseman

Products and researches

From our children's educational software and educational resources to our corporate multimedia services, Innova Multimedia focuses first and foremost on enhancing learning. Browse through our site and discover how we can help you through such items as our school resources, language software, science educational software, and a host of other solutions.

Les cours d'angl@is virtuels inc

Tel.: (418) 832-0950 Fax: (418) 832-4558

Web site: <http://www.anglaisvirtuels.com>

Contact: Daniel Lévesque

Email: info@anglaisvirtuels.com

Products and services

An innovative company, *Les cours d'angl@is virtuels inc.* offers its clients a unique language experience using the latest computer and communication technology.

With its Virtual courses, private or group (up to 6 or 7 people) lessons are available in a variety of languages, and the participants no longer have to travel. The participants progress in real-time in an environment that allows for vocal and visual contact with their teacher.

Mayet Information Systems

P.O. Box 61047 RPO Grant Park, Winnipeg, Manitoba, R3M 3X8

Web site: <http://www.mayet.ca>

Contact: Chris Adamopoulos

Tel.: (204) 477-1971

Products and services

MIS specializes in student information management applications, together with a full suite of custom software design, development and implementation services. We develop secure K-12 information systems for cross-platform deployment. MIS also provides remote hosting, database management and data escrow services.

Quillsoft Ltd.

2416 Queen Street East, Scarborough, Ontario, M1N 1A2

Tel.: (416) 698-0111 Fax: (416) 698-1555

Web site: <http://www.wordq.com>

Contact: Fraser Shein, President

Email: assistant@quillsoft.com

Products and services

Writing assistance software developer.

The WordQ software is a writing tool to be used along with standard word processing software. It suggests words for you to use and provides spoken feedback. Users of all ages who have problems writing and editing will benefit from this product.

SpeakQ plugs into WordQ and adds simple speech recognition. It helps users, particularly those with learning disabilities (LD), who cannot use other speech recognition products because of reading demands and complexity.

SpeakQ features a simple training interface where the computer prompts you by voice for what to say. You can then dictate directly into any document or dictate into WordQ's prediction list. Your speech is combined with the word prediction capability to produce documents.

Recombo

Web site: <http://www.recombo.com>

Contact: Steven Forth

Email: steven@recombo.com

Products and researches

The Recombo Connector for Learning Content is a fast, easy and cost-effective integration platform. The software guarantees interoperability, meets standards and can be integrated into any Learning Management System.

Technolinks Incorporated

18 Kittredge Court, Richmond Hill, Ontario, L4C 7X3

Tel.: (905) 508-2969 Fax:

Web site: <http://www.technolinks.com>

Contact: Penny McCahill

Email: penny@technolinks.com

Number of positions: 2

Products and research projects

Technolinks works with educators around the globe in areas relating to language development (English as a first or second language), the use of technology in education, educational research, educational administration, and business education.

Cloze Encounters Unlimited is language arts software designed to empower learners. It allows individual students or small teams of students to design three kinds of puzzles for other learners to do. Because the program is a "shell", it does not contain any puzzles; the idea is that users create puzzles suitable to their own language level and on whatever subject matter is important to them. The text that forms the basis of a particular puzzle may be something that a student or students wrote, or it may be an excerpt from a short story, novel, anthology of poetry, song lyrics, a newspaper clipping, etc. Consequently, puzzles can be designed for any reading level, on any subject matter, and can be as long or as short as appropriate.

Cache-cache is the French language adaptation of Cloze Encounters Unlimited. It is similar to the English counterpart but has options and functionality specifically related to the French language.

TTG Systems

2100 - 10130 103rd Street, Edmonton, Alberta, T5J 3N9

Web site: <http://www.ttg-inc.com>

Tel.: (780) 462-6365 Fax: (780) 450-0186

Contact: Lloyd Elder

Research projects and products

TTG Systems has 30 years of experience in delivering employee learning and performance solutions to major clients worldwide. With our Competency Analysis Profile™ methodology and our software, TRACCESS™, you can integrate job/process design, learning delivery and performance management in a single solution.

Language training technology research centres

Alberta Distance Learning Centre

4601 – 63rd Avenue (Box 4000), Barrhead, Alberta, T7N 1P4

Tel.: (780) 674-5333, ext. 5141 Fax: (780) 674-7593

Web site: <http://www.adlc.ca>

Contact: Ralph Helder, Director

Email: rhelder@adlc.ca

Research projects

The Alberta Distance Learning Centre provides effective, successful, and specialized distance learning opportunities.

The Alberta Distance Learning Centre is a provincially-funded public school operating within the Pembina Hills School Division. The school is a world leader in the delivery of distance learning programs to students in Grades 1 to 12. Distance education is offered in both print and online formats. ADLC serves students and schools throughout Alberta, the Northwest Territories, Nunavut, and students around the globe who wish to pursue their education using the Alberta Program of Studies.

The school is staffed with experienced certificated teachers and a dedicated support staff who assist students in achieving their educational goals.

Athabasca University – Research Centre

Tel.: (780) 675-6821

Web site: <http://www.athabascau.ca>

Contact: Rory McGreal, Associate Vice President, Research

Email: rory@athabascau.ca

Research projects

Heather Kanuka (Canada Research Chair in e-Learning) – Looking primarily at synchronous and asynchronous Internet communication tools, Ms. Kanuka's research focuses on how these technologies are reshaping or transforming scholarship and research, teaching and learning, and the administration these systems require.

Oscar Lin (NSERC) – Through his research into Web-based course generation and delivery, Mr. Lin is creating learning agents that will allow instructors to generate timely, personalized and adaptive curriculum best suited for each student.

Dietmar Kennepohl (OLT) – In collaboration with experts at AU and the Northern Alberta Institute of Technology, Mr. Kennepohl is exploring functional and pedagogical aspects of remote instrumentation through the Internet. His team has developed a laboratory that allows students to conduct real-time experiments via Internet controls.

Marti Cleveland-Innes (SSHRC) – In a follow-up to a recent exploratory study designed to help understand and explain the conditions under which a student will adopt the role identity of an online learner, Ms. Cleveland-Innes is testing the relationship between learner role adjustment, interaction, and higher order learning in online communities of inquiry.

Canadian Language & Literacy Research Network

Elborn College, 1201 Western Road, London, Ontario, N6G 1H1

Tel.: (519) 661-3619 Fax: (519) 661-4223

Web Site: <http://www.cllrnet.ca>

Contact: Lisa Willemse, Manager, Communications

Email: lisa@cllrnet.ca

Research Projects

The Canadian Language and Literacy Research Network supports more than 40 different research activities at 33 institutions across the country, involving 127 researchers, 68 project associates, 230 students and 106 partner organizations from the public, private and voluntary sectors. The Canadian Language and Literacy Research Network is headquartered at the University of Western Ontario.

Goals

Create knowledge and combine this with existing knowledge to improve the language and literacy skills of Canadian children.

Establish networks of selected groups of practitioners to facilitate the application of research to practice.

Measure the efficacy of conventional practices in the field and apply available knowledge to create improved educational and treatment plans and protocols.

Establish permanent networks with federal and provincial governments for the development of evidence-based policies.

Key Network Activities

Invest in multidisciplinary projects and leverage the knowledge available across the Network.

Invest in shared resources and complex technologies that are made available to individual investigators, who could not afford to access them on their own.

Provide funds to train students in the language and literacy field, and fostering their growth, as they become the next generation of child language and literacy experts.

Create links between the research, education, clinical and partner communities that will quickly translate findings into action.

Promote partnerships with industry, education and health advocacy groups, service delivery agencies, not-for-profit organizations and government.

Laboratoire en informatique cognitive et environnements de formation (Télé-Université) (LICEF)

100 Sherbrooke Street West, Montréal, Quebec, Canada H2X 3P2

Tel.: (514) 843-2015 Fax: (514) 843-2151

Web site: <http://www.licef.teluq.quebec.ca/>

Contact: Claude Rigault

Email: crigaulr@licef.teluq.quebec.ca

Research projects

LICEF is a research centre that is dedicated to cognitive computer science and training environments, as well as the Télé-Université research centre.

It encompasses around sixty individuals, including researchers, research assistants, analysts, programmers, technicians, and students from fields such as cognitive computer science, telecommunications, computational linguistics, cognitive psychology, education and communications.

This dynamic team is involved in developing methods and designing and producing tools for remote learning systems.

St. Mary's University, Liberated Learning

Saint Mary's University, Halifax, Nova Scotia, Canada, B3H 3C3

Tel.: (902) 496-8741 Fax: (902) 496-8122

Web site: <http://www.liberatedlearning.com>

Contact: David Leitch

Email: david.leitch@smu.ca

Number of positions: 18

Research projects

LIBERATED LEARNING© is a unique application of speech recognition technology as a method for assisting students with disabilities in the university classroom.

In LIBERATED LEARNING classrooms, lectures are transcribed in real time using automated speech recognition and projected to the class, enabling students to "see" the lecture. After the lecture, comprehensive, software-generated notes are provided in a variety of formats.

CONTENT MANAGEMENT

Technology in the content management sector consists of a variety of software and application solutions that facilitate the organization, classification and structuring of data resources. This technology is therefore essential to stocking, publishing and recycling the aforementioned resources in various ways. Content management applications make it possible to automatically create, interpret and analyze unstructured information, such as Word documents and emails, and semistructured information, such as forms and Web pages containing metadata. These operations are used to extract organized, targeted and accurate knowledge from large quantities of documents with little or no structure.

Some of the most common content management technology applications are search engines, classification tools, email management tools, grammar checkers, as well as a whole range of specialized tools for analyzing, classifying, processing and stocking content and contextual databases.

In terms of the number of research projects, this sector of the language technology industry is by far the most important in the Canadian industry. Indeed, this document indexes fifty-five private Canadian companies that are dedicated to researching and developing technological products for content management. This directory also lists nine research centres that are working to develop this type of technology.

Content management technology companies

ACS Software Canada Ltd.
13350 - 237th Street, #A, Maple Ridge, British Columbia, V4R 2V9 Tel.: (604) 467-1888 Web site: http://www.acssoftware.com Contact: Peter Pam Email: info@acssoftware.com
Products and researches
ACS develops information management software. Organize and control their files, provide easy access to the latest revisions, automate document approval procedures, securely view, print and redline drawings and documents and insure regulatory compliance. ACS is best known for the <u>AutoEDMS</u> and <u>AutoEDMS Anywhere</u> document management and workflow software. AutoEDMS includes the powerful <u>AutoEDMS Workflow Engine</u> . ACS also offers the optional <u>AutoEDMS Redline Module</u> .

Adapsys L.P.

363 Broadway Avenue, 2nd Floor, Winnipeg, Manitoba, R3C 3N9

Tel.: (204) 957-1885

Web site: <http://www.adapsys.ca>

Contact: Brian Meyer

Email: bmeyer@adapsys.ca

Number of positions: 75

Products and research projects

We work with a broad range of software and hardware technologies to enable organizations to improve the management and control of their structured (databases) and unstructured (documents) information, and to bridge the gap between traditional business processes and today's business technologies.

Our technology expertise includes: imaging and data capture, document and records management, from data entry to backfile scanning, PDF/HTML conversion and indexing services, workflow and electronic forms, collaboration.

Agency of General Information Retrieval (AGIR)

935 Décarie Blvd., Suite 214, Saint-Laurent, Quebec, H4L 3M3

Tel.: (514) 855-1666 Fax: (514) 855-0698

Web site: <http://www.natquest.com>

Contact: Yvette Rousseau

Products and researches

Recherche en Langage Naturel [\[Natural Language Query - add English hypertext link\]](#)

NQL (Natural Query Language) makes it easy to integrate AGIR's powerful search technology into multimedia applications on CD-ROM and other media. This program library makes it possible to integrate Natural Query Language search capabilities into various solutions.

NatQuest[®] Pro is an information management and retrieval software package. It uses NQL technology, which makes it possible to process several million documents in word processor, database, spreadsheet or HTML format.

NatQuest[®] Web makes it possible to create information bases, surf the net, and efficiently retrieve and share corporate information.

NatQuest Edition: based on natural language use and a dynamic information presentation model, NatQuest[®] Edition is a cost-effective way to prepare and publish a multimedia information base.

AmikaNow! Corporation

700 March Road, Suite 203, Kanata, Ontario, K2K 2V9

Tel.: (613) 599-4445 Fax:

Web site: www.amikanow.com

Contact: Suhayya (Sue) Abu-Hakima

Email: management@amikanow.com

Number of positions: 15

Products and researches

AmikaNow! works in the field of email content management and analysis solutions. Their software products are based on statistical and semantic algorithms that can analyze any form of content to detect any concept or pattern.

Apostrophe Software Inc.

183 Bathurst Street, Suite 302, Toronto, Ontario, M5T 2R7

Tel.: (416) 591-2373 Fax: (416) 591-7319

Web site: <http://www.aposoft.com>

Products and researches

CipherShare: a secure, distributed document management system that allows you to securely share and manage your documents over the Internet.

OrcHeStRa: Physical Demands Analysis (PDA) software package designed to help health and safety professionals better understand and catalogue the physical demands of the work force.

Arikus Inc.

4 Dunlance Drive, Toronto, Ontario, M2L 2R9

Tel.: (416) 410-8701

Web site: <http://www.arikus.com>

Contact: Aris Zakanthanlos

Products and researches

At the core of Arikus inContext™ is the Arikus Information Refinery Engine (AIRE), comprising all of Arikus' core technologies. These core technologies are also available in the form of an sdk for the developer community, and when packaged together, make up the inContext™ sdk product.

Arikus provides an information retrieval platform to allow for the automatic processing of unstructured data. At the basis of any such platform is the ability to rank a document against a query. This basic operation allows for all other operations. Without a good ranking algorithm at its core, nothing else will work well.

Arikus' information retrieval platform is based on linguistic analysis (plain language) and statistical analysis. The architecture of ranking algorithms separates the language dependent linguistic analysis from the language independent statistical analysis. The linguistic analysis is used to determine various language dependent properties such as: noise words, grammatical inflections, compounds, and pre/post-clitic. The linguistic analysis can be enhanced to take into account any special language dependent construct such as noun phrases. The linguistic analyzer creates a model of the query that is then passed to the statistical analysis layer for processing. The statistical layer looks for patterns and deviations from collection norms. The statistical analysis treats words as abstract symbols allowing it to handle any word-based language. The analysis performed allows for the automatic determination of related words. These words can then be presented to users to allow augmenting of their query or can also be used to automatically refine the queries.

Aruna Software

600 Weber Street North, Suite 200, Waterloo, Ontario, N2V 1K4

Tel.: (519) 884-4491 Fax.: (519) 884-7671

Web site: <http://www.arunasoftware.com>

Products and researches

The award-winning Aruna Companion is a database system with two key products: Aruna FastPath and Aruna Query.

With FastPath, you can obtain meaningful information from all of your data sources quickly and easily. FastPath does data integration, data cleaning, and fast data retrieval so that you can obtain reliable business information when you need it.

With Aruna Query, you can pose your query in everyday English and get answers to your business questions. In addition, you can drill down into your data in an ad hoc manner, and you can view your data in a table, chart, or graph.

Aruna Companion works along side your current database systems, and it doesn't increase the burden of your IT department. And even better, you can expect return on your investment in only a matter of months.

Axonwave Software Inc.

873-595 Burrard Street, P.O. Box 49042, Vancouver, British Columbia, V7X 1C4

Tel.: (604) 570-0182 Fax: (604) 570-0185

Web site: <http://www.axonwave.com> and <http://www.axonwavecis.com>

Contact: Fred Popowich

Email: popowich@axonwave.com

Number of positions: 25

Research Projects

Using Text Mining and Natural Language Processing for Health Care Claims Processing

A health care claims processing application is introduced which processes both structured and unstructured information associated with medical insurance claims. The application makes use of a natural language processing (NLP) engine, together with application-specific knowledge, written in a concept specification language. Using NLP techniques, the entities and relationships that act as indicators of recoverable claims are mined from management notes, call centre logs and patient records to identify medical claims that require further investigation. Text mining techniques can then be applied to find dependencies between different entities, and to combine indicators to provide scores for individual claims. Claims are scored to determine whether they involve potential fraud or abuse, or to determine whether claims should be paid by or in conjunction with other insurers or organizations. Dependencies between claims and other records can then be combined to create cases. Issues related to the design of the application are discussed, specifically the use of rule-based techniques which provide a capability for deeper analysis than traditionally found in statistical techniques.

SME Competitive Intelligence System

The World Wide Web is a natural environment in which to investigate agent-agent interaction, since it both provides the connectivity for a wide range of interactions, and it contains a great deal of information that can be used to support the interactions. A very common form of interaction between agents is the establishment or negotiation of a consumer-supplier relationship. For example, a supplier of some good or service desires to establish a relationship with a consumer of this good or service. A great deal of information that would be relevant for establishing such relationships is currently available on the Internet, but much of it is not marked-up in a manner that can be integrated easily into an application. Our goal is to use linguistic processing to automatically extract data from documents and Web pages (what we will refer to as textual resources). The extracted information, along with information about the source of the textual resources, together with information from a consumer-supplier database, will be used to score or rank relationships between consumers and suppliers. All of the information, including the scoring information could ultimately be used to create an interactive visual map involving consumers and suppliers.

Intelligent Information Access and Analysis

Emergency response organizations have access to a vast amount of data in structured

databases and document management systems, and in textual or unstructured formats on file servers, which can be accessed via the Internet or via various intranets. The challenge is to bring together these different data sources and allow users to access the information that is relevant to them in a timely fashion. Access to this information is often provided through (1) a search interface based on keywords, and/or (2) navigation of a pre-established classification scheme that has been pre-populated with documents. There are serious limitations associated with the existing methods for users to access data, and with methods used to populate portals with relevant data. We are developing a system that will leverage existing taxonomies, classification schemes, and terminology to produce a system that supports automatic categorization, and dynamic visualization without the need of domain-specific training materials.

Blast Radius

1146 Homer Street, Vancouver, British Columbia, V6B 2X6

Tel.: (604) 647-6500 Fax: (604) 689-1963

Web site: <http://www.blastradius.com>

Contact: David Saxon

Products and researches

Technologies solving content creation and collaboration challenges, advancing the goals of customer-centred enterprises. Blast Radius' products transform content into a powerful asset that can be leveraged across the enterprise.

Blast Radius has pioneered a new vision of collaboration for creative teams called Documentspaces. Documentspaces are "places" within documents where teams can meet and work, synchronously or asynchronously, to create, review, and publish document and graphical content.

XMetaL® is the first product family to implement the Documentspaces collaborative vision. Rather than trying to be a one-size-fits-all solution, XMetaL now gives organizations all the tools necessary to develop and customize their own XML authoring solution. The result ensures XML content is delivered rapidly across multiple channels - all while lowering costs. The XMetaL family comprises six advanced components engineered to simplify the creation, review, deployment, and distribution of XML content.

Casebank Technologies

1 Kenview Boulevard, Brampton, Ontario, Canada L6T 5E6

Tel.: (905) 792-0618? Fax: (905) 792-0446

Web site: <http://www.casebank.com>

Contact: Darius Knight, Vice President, Sales and Marketing

Email: dknight@casebank.com

Products and researches

SpotLight is a decision support and knowledge management tool that utilizes past experience. SpotLight's primary role is to assist in the solving of complex problems (e.g. diagnosing equipment failures). SpotLight guides the user to the solution to their problem by asking astute, to-the-point questions (just like consulting an expert). SpotLight reasons by looking among its knowledgebase of solved problems (called cases) for ones that are similar. The similar cases are presented to the user in ranked order together with additional questions. The user may review the cases for the one that best matches their current problem, or answer more questions. With each answer, SpotLight reasons on the fly to cull and re-rank the list. Once the user finds the best match, they can access the material that is stored with the case – root causes, repair instructions, tips, explanations, contacts and links to related information. SpotLight's other role is to capture and preserve the problem-solving knowledge in the organization, and to accomplish this transparently and efficiently. Knowledge is added to the structured knowledgebase (called a casebase) in two ways. Initially a seed casebase is built utilizing historical data (such as maintenance records and service incident reports). Subsequently, when a user finds a problem with no matching case, SpotLight facilitates the problem resolution by sharing the diagnostic session with others (e.g. specialists). Once the team has solved the problem, all the relevant information, including user input captured transparently during the session, is easily developed into a new case.

The core technology behind SpotLight is "Case-Based Reasoning" (CBR). CaseBank's patented extensions to CBR set it apart from other CBR products in the marketplace when it comes to providing intelligent decision support in complex environments.

Cedrom-SNI inc.

825 Querbes Street, Suite 200, Outremont, Quebec, H2V 3X1

Tel.: (514) 278-6060 Fax: (514) 278-5415

Web site: <http://www.cedrom-sni.com>

Contact: François Aird

Email: m.veillette@cedrom-sni.com

Number of positions: 90

Products and researches

CEDROM-SNI's online solutions make it easier for you to manage relevant information for your organization: searching archives, monitoring news, distributing information to user groups, posting articles on the Internet or an intranet.

NewsScan.com Virtual News Library provides exclusive daily-updated content from the largest newspapers in the country. International coverage from renowned English- and French-language publications enhances the content. NewsScan.com Virtual News Library gives you access to an extensive range of newspapers, trade publications, news agencies, audio capsules and transcripts of television and radio programs.

CGK Technologies Group

85 Bayfield Street, Suite 402, Barrie, Ontario, L4M 3A7

Tel.: (705) 733-9099 Fax: (705) 733-8859

Web site: <http://www.cgkgroup.com>

Contact: Krista Larivière

Email: krista@cgkgroup.com

Products and researches

Web Application Development: Web Content Management, Custom Web Development, e-Commerce, Support

Internet Marketing & Communications: Search Engine Optimization, Web Design, Email Marketing, Web Statistics & Analysis, Web Content Management, Internet Infrastructure

Web Hosting: Data Protection, Managed Internet Services, Email Services

Chamblon Systems

40 Wenworth Avenue, Cambridge, Ontario, N1 6 1G6

Tel.: (519) 622-6527

Web site: <http://www.chamblon.com>

Email: info@chamblon.com

Products and researches

Chamblon Systems has been developing natural language processing tools and solutions for almost twenty years.

We are currently shipping two products: Quant, a text metric program for Microsoft Word or Windows; and TerminologyExtractor, a tool for extracting words and collocations from HTML, RTF, Microsoft Word documents and plain text files.

Cogilex Natural Language Processing

1855 Kenilworth Road, Mont-Royal, Quebec, H3C 2S7

Web site: <http://www.cogilex.com>

Email: info@cogilex.com

Products and researches

Cogilex provides Natural Language Processing solutions to industrial partners and clients for a wide variety of applications involving text mining and information extraction. Cogilex's expertise lies in the fine grain understanding of unstructured text through data-driven syntactic and semantic analysis.

Cogilex uses a sophisticated toolbox of Win32 and Linux components to assemble customized solutions. Cogilex's components include:

Language Identifier: Establishing the language of a document or portion of text. Cogilex's Language Identifier can work on multi-language documents.

Canonical Form Generator: Attributing generic forms to words at different levels of abstraction, from simple stemming to synonym and hypernym replacement. This is useful for sophisticated text indexing.

Morphological Tagger: Assigning parts of speech and morphological attributes to words. This is used as input for syntactic parsing or can be used on its own for advanced text indexing and retrieval.

Noun Phrase Tagger: Determining the boundaries and structure of noun phrases. This can be used for concept extraction and text indexing and is used to generate input the Entity Identifier.

Entity Identifier: Identifying the semantic nature of noun phrases within a hierarchical ontology using sophisticated contextual rules.

Fine Grain Concordancer: Retrieving the context of occurrence of a pattern in a set of documents. This pattern can be based on a variety of lexical, syntactic and semantic properties.

Syntactic Parser: Establishing the grammatical relationships between words and groups of words. Cogilex's parser is a robust dependency-type English language parser.

Entity Attribute Extractor: Creating Entity-Attribute-Value records from the result of syntactic parsing based on knowledge representations of different domains. This is used for fine grain information extraction from sentences. High levels of accuracy can be achieved in well-specified domains.

Semantic Interpreter: Validating and deducing new Entity records from domain knowledge description. This component provides a high-level analysis of relationships between different extracted records as well as a measure of the accuracy and likeliness of information extracted from sentences.

Cognos Incorporated

5700 Yonge Street, North York, Ontario, M2M 4K2

Tel.: (416) 221-0937

Web site: <http://www.cognos.com>

Contact: David Lavery

Products and researches

Cognos produces business intelligence (BI) and performance planning software for companies. Its solutions let companies improve and direct corporate performance by enabling all of the key steps in the management cycle—from planning and budgeting, to measuring and monitoring performance, to reporting and analysis. Cognos is the only company to support all of these key management activities with a complete solution that spans all of the essential components of CPM—enterprise planning, scorecarding, and business intelligence.

Convera Canada

55 Prince Street, Montréal, Quebec, H3C 2M7

Tel.: 514 848 9621 Fax: 514 848 9741

Web site: <http://www.convera.com>

Contact: Pat Condo

Products and researches

RetrievalWare: a complete knowledge discovery platform for information intensive enterprises that maximizes return on investment in vast stores of unstructured information by providing highly scalable, fast, accurate and secure searches across more than 200 forms of text, video, image and audio information, in more than 45 languages.

Excalibur: an Internet search solution that represents the world's largest, deepest index of categorized and authority-ranked Web results. Excalibur indexes and organizes the Web into millions of distinct categories, delivering professional quality search results tailored to individual needs. The exceptional accuracy and authority will ensure Web users locate the information they're seeking.

Copernic Technologies, Inc.

360 Franquet Street, Suite 60, Sainte-Foy, Quebec, G1P 4N3

Tel.: (418) 527-0528 Fax: (418) 527-1751

Web site: <http://www.copernic.com>

Contact: Éric Bouchard, vice-president

Email: ebouchard@copernic.com

Products and services

Developer of Copernic Search, a research and indexing software:

Indexing

Combining robustness and scalability, this technology retrieves and indexes data wherever it may be found: on a computer or a corporate intranet. It makes use of advanced language and linguistic analysis technologies, resulting in unparalleled indexing precision.

Searching

This technology has the power necessary to query a variety of information sources simultaneously. From a single access point, users can create simple or advanced queries and quickly get results that are unsurpassed in quality and relevancy.

Summarization

Using advanced statistical and linguistic algorithms, this technology pinpoints the key concepts of texts and extracts the most relevant sentences to produce a condensed version of the original text. With the addition of a unique proprietary technology called WebEssence, irrelevant text and other nonessential content found on Web pages are ignored, resulting in summaries that are remarkably accurate.

Tracking

This innovative technology monitors Web pages and automatically detects any changes that are made to their status or content. Therefore, if their contents are modified in any way, the tracking module will automatically inform the user of the changes by email. This technology also highlights the elements that have changed since the Web page was last updated, which reduces the users' reading time.

Coredge Software Inc.

2190 Thurston Drive, Ottawa, Ontario, Canada, K1G 6E1

Tel.: (613) 739-8580 Fax: (613) 739-8680

Web site: <http://www.coredge.com>

Contact: Gorgon Dalgard

Email: galdgard@coredge.com

Products and researches

Coredge Software Inc. is a world leader in software tools for accessing, exchanging and organizing unstructured electronic data.

The COR product line is the leading middleware integration between Lotus databases (i.e. email) and Hummingbird's Document Management (DM) suite. The COR product line provides seamless integration between these disparate software suites. COR is used by Fortune 500 companies and governmental organizations around the world.

Logik is an application for automatically analyzing and coding unstructured textual documents. Logik's algorithm extracts the key themes from documents such as e-mail, PDF, DOC, WP, websites, etc. Logik gives users their 'first look' at what a document, or a collection of documents, is about before a more detailed search is initiated. Logik is used by large corporations, academic researchers, legal support, competitive intelligence and individuals who spend time conducting Web-based research. Logik's collaboration and visualization tools are changing the way the world conducts research!

Coveo Solutions Inc.

2800 St-Jean-Baptiste Avenue, Suite 212, Québec, Quebec G2E 6J5

Tel.: (418) 263-1111 Fax: (418) 263-1221

Web site: <http://www.coveo.com>

Contact: Pascal Soucy

Email: psoucy@coveo.com

Number of positions: 20

Product research and development

Product: Coveo Enterprise Search (multilingual search engine for companies) is a search engine and platform that enables companies to search and manage documents.

Project: Information extraction and automatic document summarization. Research and development in random information extraction (i.e. names of persons or places) and automatic document summarization (extract key concepts and sentences).

Delphes Technologies

75 Queen Street, Suite 3100, Montréal, Quebec, H3C 2N6

Tel.: (514) 938-4500 Fax: (514) 908-2885

Web site: <http://www.delphes.com>

Contact: Richard Turgeon, Executive Director, Business Development

Email: ventes@delphes.com

Products and services

Delphes offers an intelligent knowledge service that combines advanced information structure expertise with an innovative technology for organizing know-how.

This knowledge service includes the Knowledge Market, the Services Basket, intellectual capital and corporate knowledge management, which ensure an increase in productivity and strategic value for corporations, governments and institutions.

The Delphes system includes, among other things, task assistance tools such as the Intelligent Agent, the Personal Project Manager, the Information Manager and the Knowledge Manager.

Based on a solid linguistic foundation, the Delphes system also provides natural language queries, a user-friendly interface, a client profile- or business theme-based presentation, automatic classification, a relevant synthesis of results, an instinctive presentation of information, acquisition of structured syntheses per personal file and IP accessibility, handheld computers or PCs.

Interoperability with the following management systems:

- Portal: WebSphere Portal/IBM, SPS/Microsoft, BEA Weblogic
- Content: CMS/Microsoft, LotusWorkplace/IBM
- Email: Lotus Notes/IBM, Microsoft Exchange
- Document: Sharepoint, Documentum, Hummingbird
- Security: Microsoft Active Directory, Select Acces/HP, Tivoli/IBM

Documens

5160 Décarie Blvd., Suite 800, Montréal, Quebec, H3X 2H9

<http://www.documens.com>

Contact: Ronald Brisebois

Email: info@documens.com

Tel.: (514) 733-1095 Fax: (514) 733-2774

Products and researches

Documens is a leader in multilingual online document and content production and management. Based in Montréal, it has 130 employees in its six North American and European offices.

Documens' solutions and technologies are therefore intended for organizations who want to increase their productivity by automating the production and management of their content and documents and extend their accessibility by making them simultaneously available online in several languages.

EB Data

1075 Van Horne Avenue, Suite C, Outremont, Quebec, Canada, H2V 1J6

Web site: <http://www.ebdata.com>

Tel.: (514) 276-1700 ext. 101

Contact: Frédéric Chevalier, VP Development

Email: fvalier@ebdata.com

Products and services

E&B DATA is primarily known for its Business Intelligence products, such as its review of capital investments or its annual benchmark report on high tech corporations in North America. However, the original techniques for content and knowledge management, developed and utilized by E&B DATA for the acquisition and diffusion of information, have provoked such strong interest among its client base that these informational tools are now available as part of the services offered. E&B DATA's Content Management Tools include the following:

- Web site editing and Web-community management: CI Micro Portal
- Information management: DataOrganizer
- Content diffusion: Newsletter Manager
- Advanced research: Website Crawler
- Site administration: WebVerifier

Eloqua Corporation

553 Richmond Street West, Suite 214, Toronto, Ontario, Canada, M5V 1Y6

Tel.: (416) 864-0440 Fax: (416) 864-1881

Web site: <http://www.eloqua.com>

Contact: Mark Organ

Products and researches

Hypersite software: Deliver the best message to each prospect - based on information you already have - to improve response and build trust with your prospects. Your Eloqua direct marketing campaigns drive each prospect to a Hypersite - a personal Web site automatically adapting your marketing message based on company, industry, job title, geography or anything you already know. You can welcome people by name, in their own language, with specific information showing your understanding of their own product and market needs.

Ever America

260 Holiday Inn Drive, Suite 25, Cambridge, Ontario, N3C 4E8

Tel.: (519) 651-3369 Fax: (519) 651-1318

Web site: <http://www.ever-america.com>

Email: eversales@ever-america.com

Products and researches

EVER America develops and markets document and content management software for public and private sector organizations. Our pre-packaged EVERSuite solutions for contact centres solve various information management problems encountered in customer contacts as well as back office operations. We focus on enabling organizations to manage unstructured content ranging from scanned images to email, all within the context of their business processes.

Front Logic

111 2nd Avenue South, Suite 300, Saskatoon, Saskatchewan, S7K 1K6

Tel.: (306) 653-2725 Fax: (306) 653-0972

Web site: <http://www.frontlogic.com>

Contact: Don Thompson

Email: info@frontlogic.com

Products and researches

Dedicated to the development and production of information management and e-commerce technologies, Front Logic builds products that retrieve information, customize data, deliver digital products, and provide fully customized portal solutions. Through a series of core technologies built under TYPENGO™ and OpenMarketOne, the company provides scalable information database solutions to the B2B and B2C sectors, revolutionizing the way companies and customers search, locate, present, deliver, and interact with information and products. Users of TYPENGO™ and OpenMarketOne Web experience enhancing solutions that push the envelope of information retrieval and presentation beyond the preconceived thresholds of power, accuracy and speed.

Hummingbird

1 Sparks Avenue, Toronto, Ontario, M2H 2W1

Tel.: (416) 497-7700 Fax: (416) 496-2207

Web site: www.hummingbird.com

Contact: Fred Surtin

Email: juliette.betts@hummingbird.com

Products and researches

Hummingbird builds software solutions to access, manage, protect, extract, analyze, exchange and archive business content and transactional data across the extended enterprise from anywhere in the world.

Ibertron Technologies

Suite 209, 1829 Ranchlands Blvd. NW, Calgary, Alberta, T3H 1B8

Web site: <http://www.ibertron.com>

Tel.: (403) 241-5578 Fax: (403) 241-5581

Contact: Alex Fernandez, President

Email: president@ibertron.com

Products and researches

Ibertron Technologies provides comprehensive information management solutions for diverse industries ranging from oil & gas and property management to construction and manufacturing.

Ibertron creates software that is current with the most up to date technologies. This allows customers the ultimate in control, maintenance and access for their electronic databases.

The created software can ride on top of existing programs; thereby creating functionality that far exceeds present abilities. It can also be automated to perform certain tasks at specific times. Not only can this plan for a custom design increase work performance, but it can also to streamline critical business applications. The benefits of custom database applications are numerous.

Idilia

416 de Maisonneuve Blvd., Suite 416, Montréal, Quebec, H3A 1L2

Tel.: (514) 843-6897 Fax: (514) 843-6347

Web site: www.idilia.com

Contact: Matthew Colledge

Email: info@idilia.com

Products and researches

Idilia develops nondomain-specific natural language processing technology that provides software applications with access to the precise semantics contained in naturally expressed language, allowing such applications to manipulate and use naturally expressed information in a manner comparable to humans. The technology is based on a fusion of computational linguistic and statistical machine learning approaches.

Products: Semantic Analysis, New Knowledge Extraction.

inSystems Corporation

9 Allstate Parkway Suite 400, Markham, Ontario, L3R 5A4

Tel.: (905) 513-1400 Fax: (905) 513-1419

Contact: Andy Amalfitano

Products and researches

The company provides portal and document management software designed to help insurance companies make Web-based sales, improve customer service, and grow revenues. Counting more than half of the top 100 insurers in North America as customers, inSystems offers its Calligo document management application; inSystems Tracker for ensuring regulatory compliance and inSystems FastForms for automating Web-based insurance forms. The company also offers a tool for speeding up hospital admissions.

Interfacing Technologies Corporation

3333 Côte-Vertu Road, Suite 400, Montréal, Quebec, Canada, H4R 2N1

Web site: <http://www.interfacing.com>

Tel.: 514.737.7333 Fax: 514.737.0856

Contact: Meir Levi

Products and researches

Interfacing provides collaborative software tools that enable business users to model, map and manage business processes and related knowledge. Easy-to-use and intuitive single-user desktop products and multi-user enterprise solutions.

The Enterprise Process Center (EPC) is our affordable, multi-user business process management (BPM) software product. It delivers collaborative process modeling and content management to every employee desktop.

Irosoft Inc.

3900 Côte-Vertu Road, Suite 208, St-Laurent, Quebec, H4R 1V4

Tel.: (514) 920-0020 ext. 28 Fax: (514) 920-0028

Web site: <http://www.irosoft.com>

Contact: Alain Lavoie

Email: lavoie@irosoft.com

Products and researches

Irosoft is a products and services company that was founded in 1995. Irosoft focuses its service, research and development activities on electronic document management (EDM), electronic information dissemination, and on open standards such as XML and SGML.

Irosoft masters all aspects of document management, which enables it to provide unilingual or multilingual solutions that cover all the steps of the document process:

- Data structure modelling in schemas or DTD;
- Conversion of unstructured documents into XML from grammar checker analyses;
- Editing of documents using an XML editor available on the market or the IroXML editor from Irosoft;
- Content analysis and information retrieval to establish knowledge databases, specialized dictionaries, a thesaurus and classification schemes;
- Document storage and management in a relational database such as Oracle or MySQL, or an XML-native database such as TeraText;
- Multimedia content dissemination (paper, CD-ROM, Internet);
- Document retention and document life-cycle management using a retention schedule;
- Assisted production of documents via workflow management tools, automation of information processing, etc.;

As part of its research and development activities, Irosoft develops techno-linguistic tools that are compatible with its own document management solutions. These tools provide a considerable advantage, as they add both functionality and user-friendliness.

Among other things, Irosoft has developed:

- An XML and SGML editor;
- A tool that analyzes texts and automatically creates cross references from one document to another using hyperlinks;
- A proven search engine that enables the user to find documents or parts of documents that correspond to a user query formulated in natural language;
- Tools that enable users to improve their queries.

Irosoft has already successfully used some of these technologies in document management solutions it developed for several clients.

iUpload

3385 Harvester Road, Suite 235, Burlington, Ontario, L7N 3N2

Tel.: (905) 681-5334 Fax: (905) 632-4922

Web site: <http://www.iupload.com>

Contact: Allen Baker

Email: info@iupload.com

Products and researches

iUpload is a leading content management and corporate blogging software company whose solutions help organizations optimize the marketing potential of their content. Whether you're an individual, a corporation or a community, iUpload provides a powerful one-stop solution for creating, managing and distributing all of your content, while giving you a new social marketing platform that extends your corporate voice and strengthens your brand across multiple communities.

The iUpload Application Suite consists of:

- . iUpload Content Manager
- . iUpload Community Publisher
- . iUpload Personal Publisher
- . iUpload Perspectives

All products work seamlessly together using the same user interface, making it easier for authors of all levels to reach new audiences instantly. iUpload's scalable approach allows seamless integration into any environment.

Ixiasoft

75 Queen Street, Suite 4600, Montréal, Quebec, H3C 2N6

Tel.: (514) 279-4942 Fax: (514) 279-3947

Web site: <http://www.ixiasoft.com>

Contact: Éric Bergeron, Chief Executive Officer

Email: info@ixiasoft.com

Products and researches

Enterprise content management (ECM) technologies are tools and methods that help capture, manage, store, preserve and deliver content for business processes. Because of its acceptance as an open standard for information exchange and the flexibility it brings to content creation and recycling, XML plays a major role in the success of any ECM solution. Designed from the ground up to handle XML content, TEXTML Server is the ultimate XML database and search engine used to enhance the performance of enterprise content management applications.

Organizations producing large volumes of technical documentation require reliable applications enabling them to produce, edit, maintain and publish information quickly and efficiently. XML standards, like DITA and S1000D, are key enabling technologies for dynamic content delivery, content recycling, and cost effectiveness.

Knexa

911 - 470 Granville Street, Vancouver, British Columbia, Canada, V6C 1V5

Web site: <http://www.knexa.com>

Contact: Ravinder Mlait, Vice President Business Development

Email: infoknexa@knexa.com

Products and researches

Knexa is a leading provider of Knowledge Management Solutions. Today, Knexa's customers use Knexa's products and services to satisfy their customers' needs; collaborate, share knowledge; and achieve excellence. Knexa's innovative Tribute Knowledge Management software and business methodology fosters knowledge sharing in organizations with the goal of driving innovation, increasing revenue, reducing costs and developing a cohesive corporate culture.

Knowledge4You Corporation

675 Cochrane Drive, Suite 510, East Tower, Markham, Ontario, L3R 0B8

Web site: www.knowledge4you.com

Contact: Radu Bestemean

Tel.: (905) 947 9924 Fax: (905) 248 3285

Products and services

Our speciality is Web-based products for the collection, analysis and dissemination of data. We have developed a suite of products for business intelligence, online student administration and Web analysis.

Macadamian Software Labs

700 Industrial Avenue, Suite 210, Ottawa, Ontario, K1G 0Y9

Web site: <http://www.macadamian.com>

Tel.: (613) 739-5976 Fax: (613) 739-9859

Contact: Matthew Hately, VP Marketing

Products and services

Macadamian is versed in the architecture, design and development of VoIP (Voice-Over-IP) applications – from the network core to the end-user interface. We develop reliable software and intuitive interfaces that help ensure that new applications can be quickly rolled out and are user-friendly.

Marqui Canada

Suite 300, 1201 West Pender Street, Vancouver, British Columbia, V6E 2V2

Web site: <http://www.marqui.com>

Tel.: (604) 682-7333 Fax: (604) 682-7394

Contact: Tara Smith

Email: tsmith@marqui.com

Products and researches

By combining content management, email campaign management, business process management, business blog management, analytics and more in one Web-based package, Marqui enables customers to manage a wide range of marketing communications initiatives without the issues and costs of multiple product purchases, integrations and training.

Mio Business Intelligence

221 Freeman Road., Suite 155, Gatineau, Quebec, J8Z 2A8

Tel.: (819) 778-6000 Fax: (819) 778-2596

Web site: <http://www.mioinc.com>

Contact: Gilles Larouche, President

Email: solutions@mioinc.com

Number of positions: 10

Products and researches

Since 1985, MiO's business mission has been to organize knowledge in professional service organizations with integrated software solutions that manage time, money, documents and contacts.

Today, mainstream businesses such as law firms, financial services, corporations and governments have stepped up to Jurivox™.

The unique modular design of MiO's solutions allows us to modify and adapt our software solutions to the specific requirements of your organization, today and in the future.

Our team will integrate solutions perfectly adapted to your organizational processes. Getting your staff to migrate to our solutions is easy; training offered by certified instructors will make learning and implementation seamless.

When you need answers, our team of skilled technical support specialists is ready to provide quick and accurate answers to your inquiries.

Nomino Technologies

4750 Henri-Julien Street, Suite R-300, Montréal, Quebec, H2T 3E4

Tel.: (514) 843-2152 Fax: (514) 843-2153

Web site: www.nominotechnologies.com

Contact: Alain Thibault

Email: athibault@nominotechnologies.com

Number of positions: 10

Products and researches

Nomino provides organizations with scalable Self-Service solutions. Whether the organization needs a traditional search engine or a powerful self-service knowledge base, Nomino solutions are all built on a patented Natural Language Processing technology ensuring that customers will retrieve the requested information in everyday language.

Nomino Answer is a Web information retrieval and customer service tool that responds to Internet and/or intranet user requests submitted in everyday language. Based on NLP technology, Nomino Answer provides accurate responses to unstructured requests.

Nomino Assistant is a powerful, flexible and interactive solution that provides our clients with the new generation of a personalized virtual assistant. It instantly builds a relationship with your clients based on understanding and real-time dialogue.

Nomino Mail is an intelligent Email Management Response System (ERMS) that analyzes, sorts, forwards and responds to incoming e-mails.

Nomino Search is an accurate and relevant search solution for your Web site. Based on NLP technology, Nomino Search answers vague queries submitted in everyday language. Nomino search is a powerful search engine that can be integrated into your Web site, intranet and/or extranet.

NStein Technologies

75 Queen Street, Suite 4400, Montréal, Quebec, H3C 2N6

Tel.: (514) 908-5406 Fax: (514) 908-5407

Web site: www.nstein.com

Contact: Rina Marchand

Email: info@nstein.com

Products and researches

Nstein Technologies (TSX-V: EIN) develops and markets leading-edge software solutions for analyzing vast amounts of unstructured data in virtually all languages. Nstein's linguistic-based platform collects, organizes, analyzes, cross-examines, shares and translates data from any source, in real time. Nstein's company search and information access solutions transform reactive decision making into a proactive, even predictive, process, and solve mission critical problems. Nstein has developed customized solutions for clients in homeland security and intelligence, e-publishing markets, as well as for large companies and government organizations.

Open Text Corp

185 Columbia Street West, Waterloo, Ontario, N2L 5Z5

Tel.: (519) 888-7111 Fax: (519) 888-0677

Web site: <http://www.opentext.com>

Contact: Communications

Email: procurement@opentext.com

Number of positions: 48

Products and researches

Open Text Corporation is an Enterprise Content Management (ECM) solutions provider of solutions that unite people, processes and information. Open Text solutions combine collaboration and content management, transforming information into knowledge, which is the foundation for innovation, compliancy and growth.

Livelink Enterprise Server, Open Text's flagship product, is the leading Content Management solution for any company. Its functional wealth is the result of a unique combination of collaboration tools, content management, information retrieval and automated workflow management, closely linked with a solution that is easy to customize and user-friendly.

Pathix ASP

9 Austin Street, P.O. Box 13306, Station A, St. John's, Newfoundland, Canada, A1B 4B7

Web site: <http://www.pathix.com>

Tel.: 1 (866) 724-8500 Fax: (709) 724-8545

Products and researches

Pathix ASP, a division of ACROHELIPRO Global Services Inc., delivers unparalleled service in the information technology sector. Specializing in total knowledge management solutions, Pathix ASP brings together knowledge, skills, creativity, and technology to create solutions that provide measurable business results. We have extensive experience in centrally networking remote locations, implementing Lotus Notes and Domino platforms, instituting data warehousing solutions, and providing programming services with such leading tools as IBM's WebSphere universal Internet software platform.

Navixa is a complete aviation management software system. It enables aviation companies to manage the flow of information while enhancing the decision-making process by using comprehensive cost analysis, and planning and tracking daily maintenance operations and costs. Even though it is fully integrated within its own modular design, Navixa can operate, stand alone or integrate with most financial software applications through its application program interfaces (APIs).

Pathix ASP offers a competitive advantage in providing customized solutions to meet our client's organizational needs. We work with our clients' internal staff to better understand their organization and business goals and, in doing so, develop the model best suited to their needs and for a successful IT solution and infrastructure.

Powervision Software Inc.

1410, 715 – 5th Avenue SW, Calgary, Alberta, T2P 2X6

Web site: <http://www.powervisionsw.com>

Tel.: (403) 265-0555 Fax: (403) 265-0557

Products and researches

The company's mission is to be a provider of enterprise-class Electronic Document Management (EDM) solutions in the international marketplace. Powervision's customers use its EDM solutions to capture, manage and efficiently use the vital corporate knowledge contained in their documents.

PowerView is an enterprise-class Integrated Document Management product suite that lets you capture, organize, index, store, secure, access and transfer corporate documents. PowerView can be implemented in a small departmental environment supporting few users, or as an enterprise-wide solution, supporting thousands of users and millions of documents.

PowerView's flexible EFR (Electronic File Room) allows you to keep your thousands of documents neatly organized in an easy-to-understand Room/Cabinet/Drawer/Folder/Document hierarchy. **PowerView** does not use proprietary file formats and it lets you choose the storage technology most appropriate to your needs. You can take full advantage of virtually any storage media, including magnetic, RAID, Optical, WORM, CD-ROM, etc. Today's Optical Jukeboxes allow easy access to hundreds of gigabytes online, and with its automatic pre-fetching and caching mechanism, **PowerView** ensures optimum performance, regardless of the size of your document database.

PowerView's modules address the many technologies of EDM (Electronic Document Management) in a fully integrated and scalable product set: an Electronic Image Management system, an Electronic Document Management system, and an Assisted Record Manager module that provides a full-function Records Management system, allow you to classify, index and search your many non-electronic records such as paper files, offsite storage, backup media, etc.

ReadPlease

121 Cherry Ridge Road, Thunder Bay, Ontario, P7G 1A7

Web site: <http://www.readplease.com>

Tel.: 807-474-7702

Fax: 807-768-1285

Contact: Rob McCormick

Products and researches

ReadPlease offers a variety of text-to-speech products for a wide spectrum of users, ranging from business to personal use.

ReadPlease 2003 (free edition) offers full support for all Microsoft voices, reads text via Windows clipboard from any program, and includes adjustable voice speed (rate).

ReadPlease Plus 2003 has all the features of ReadPlease 2003, and you can add your own words and pronunciations. Furthermore, playback can start anywhere in a document.

ReadingBar 2 reads any Web page aloud to you, highlights words in Internet Explorer, and easily creates .mp3 or .wav files from Web pages.

AT&T Natural Voices are the clearest and most versatile voices offered by AT&T, and there are over 20 different character voices available!

Safe Software Inc.

2017-7445-132nd St., Surrey, British Columbia

Tel.: (604) 501-9985 Fax:

Web site: <http://www.safe.com>

Contact: Karen Liu, Marketing Communications Coordinator

Email: karen.liu@shaw.ca

Number of positions: 41

Products and researches

Safe Software Inc. specializes in spatial ETL (Extract, Transform and Load) technologies and in spatial data interoperability. Safe Software focuses on providing software solutions that deliver seamless data access and format translation.

Safe Software Inc. relies on its ETL tool, FME. This technology makes it possible to transcend format barriers and transform data models.

Searchlight Systems

500 - 329 Railway Street, Vancouver, British Columbia, V6A 1A4

Web site: <http://www.searchlight.ca>

Tel.: (604) 255-4620 Fax: (604) 255-3333

Contact: Gary Procknow

Products and researches

Searchlight™ is the name of a unique and revolutionary software product designed to make information management a strategic tool. The principal focus to date has been on law, construction, engineering and insurance. Searchlight™ is a fully-integrated software package that links and cross-references all your project information.

Sonic Boomerang Inc.

44 Charles Street, Suite 2807, Toronto, Ontario, M4Y 1R7

Web site: <http://www.sonicboomerang.com>

Tel.: (416) 530-7840

Contact: Justin Winfield

Products and researches

Automated text and sentiment analysis engines.

Customized solutions for the media intelligence industry.

Bring context to content.

Automated analysis of media content (including print, audio, Internet, message boards and Web logs) to determine: topic, company, person, geography, commentator, journalist, sentiment, past/present/future orientation.

Stilo Content Engineering

1900 City Park Drive, Suite 504, Ottawa, Ontario, K1J 1A3

Tel.: (613) 745-4242 Fax: (613) 745-5560

Web site: <http://www.wordq.com>

Contact: Norbert Winklareth

Email: gcarriere@ca.stilo.com

Number of positions: 50

Products and researches

Stilo's Content Engineering solutions address the complex technical issues involved in content creation and management, content processing and migration and content integration. We combine world-class products and technologies with an impressive partner network and our own domain/technology expertise to deliver Content Engineering solutions that enable large organizations to extract the maximum possible value from their content. Stilo helps organizations realize the maximum value of their content by providing content engineering solutions that complement those offered by vendors of content management, authoring and publishing systems. Our solutions enable high-performance processing of content at a sub-document, granular level of detail and optimize the flow of content throughout the enterprise.

OmniMark is the technology of choice for corporations building large-scale content processing applications. OmniMark is designed specifically for content processing. This means more than the ability to parse XML and match patterns in unstructured text - capabilities found in many technologies. OmniMark is designed to handle the truly tough problems of content processing: managing context as well as scale.

Storageplex Limited

1 Research Drive, Dartmouth, Nova Scotia, B3Y 4M9

Web site: <http://www.storageplex.com>

Tel.: (902) 464-4492 Fax: (902) 466-6889

Email: investor.relations@storageplex.com

Products and services

Storageplex Limited, creators of the Internet Data Manager (iDM) suite of products, is the provider of online storage and file sharing services for professional and small to medium sized enterprises (SME).

iDM provides the power of a personal file server that is accessible from any Internet connection with no special software requirement. Storageplex offers many customizable solutions for a variety of industry and data requirements.

Tower Software

8th Floor, 2425 Matheson Blvd. East, Mississauga, Ontario, L4W 5K4

Tel.: (905) 361-2859 Fax: (905) 361-2609

Web site: <http://www.towersoft.com>

Contact: Krista Curtis

Email: krista.curtis@towersoft.com

Products and researches

TOWER Software, a leading enterprise content management (ECM) provider, delivers electronic document and records management (EDRM) solutions. TOWER Software's award-winning solutions allow organizations to manage and secure their vital information assets. The TRIM Context® solution is a single, integrated platform that manages business information throughout its complete lifecycle. By relying on its proven domain expertise, strong strategic partnerships, and powerful solutions, TOWER Software enables organizations to improve the accuracy of information on which business decisions are based; maximize efficiency by finding critical business information more quickly and easily; and achieve and maintain compliance standards across industries, resulting in a sustained competitive advantage.

Tradebytes Data Corp

1066 West Hastings Street, Suite 2330, Vancouver, British Columbia, V6E 3X2

Web site: <http://www.tradebytes.com>

Tel.: (604) 601-8205 Fax: (604) 608-2611

Email: terrie@tradebytes.com

Products and researches

TradeBytes Data Corp. provides competitive marketing intelligence to businesses around the world. Using its proprietary search engine and specialized interface technology, it has built a powerful range of information products. It is involved in acquiring data from around the world and developing new applications for information products.

Vircom Inc.

2055 Peel Street, Suite 100, Montréal, Quebec, H3A 1V4

Web site: <http://www.vircom.com>

Tel.: (514) 845-1666 Fax: (514) 845-6922

Contact: Sylvain Durocher, President

Email: sylvain.durocher@vircom.com

Products and researches

Vircom's secure email management software and appliance solutions provide a global approach to email security. Our products incorporate a variety of technologies including: anti-spam, anti-phishing, anti-virus (secured by Norman Data Defence and McAfee Security), email-security, SPF, email encryption, DOS (denial of service) protection, dictionary harvesting protection, policy management, spam pattern recognition, configurable sieve scripting language, content-based archiving and much more. These solutions run on a Microsoft platform and enhance the value of exchange by off-loading redundant tasks. Modus products are available as an appliance, software or hosted solution.

Visiphor

1100-4710 Kingsway Street, Burnaby, British Columbia, V5H 4M2

Tel.: (604) 684-2449 Fax:

Web site: <http://www.visiphor.com>

Contact: Eric Westra

Email: eric.westra@visiphor.com

Products and research projects

Based in Vancouver, British Columbia, Visiphor specializes in developing and marketing software products that allow integrated access to applications and databases. The company also develops solutions that automate law enforcement procedures and evidence handling. These solutions often incorporate Visiphor's proprietary facial recognition algorithms and tools. Using industry standard Web services, Visiphor delivers a secure and economical approach to true, real-time application interoperability.

Visiphor has a paradigm-shifting approach to the problem of disparate data integration called the Briyante Integration Environment. BIE consists of the Visual Design Studio, Interface SDK, and Integration Server. These elements work together to enable Visiphor, its business partners, and clients to architect and deploy data sharing solutions quickly and easily.

InForce AB facilitates the arrest and booking process for law enforcement agencies. The software records important information about the arrestee and allows officers to identify repeat offenders through facial recognition.

Developed using the Briyante Integration Environment, InForce IQ enables real-time querying of text- and image-based information from disparate data sources, including multiple Records Management Systems (RMS), Jail Management Systems (JMS), and other criminal justice and public safety databases. The software also enables querying between multiple jurisdictions and agencies.

Zantaz

1600 Carling Avenue, Suite 800, Ottawa, Ontario, K1Z 1G3

Tel.: 1 800 636-0095

Web site: <http://www.zantaz.com>

Contact: Debbie Moffat, Managing Director

Number of positions: 25

Products and researches

Information Retention and Discovery Management Solutions

Solutions for Information Retention and Discovery Management (IRDM) enable leading organizations to capture, preserve and access unstructured digital information — including email, IM, files, scanned documents and other electronic records. ZANTAZ's solutions also enable organizations to review and produce relevant documents in a manner that reduces operational risk and costs while complying with legal, regulatory and business policy requirements.

ZANTAZ offers a full complement of services and tools required to successfully address your email and file archiving, compliance, electronic discovery and litigation support needs.

Zi Corporation

840 7th Avenue SW, Suite 2100, Calgary, Alberta, T2P 3G2

Tel.: (403) 233-8875 Fax: (403) 233-8878

Web site: <http://www.zicorp.com>

Contact: Sean McLennan, Manager of Linguistics

Email: smclennan@zicorp.com or info@zicorp.com

Number of positions: 70

Products and researches

Zi Corporation's intuitive text input solutions, eZiText[®] and eZiTap[™], significantly increase the ease, speed and accuracy of text input on any electronic device, including mobile phones, hand-held computers, automotive systems and television set-top boxes. Zi's proprietary embedded software technology enables users to easily sort messages, email, and carry out e-commerce transactions and more in almost any written language.

Even before all keys are pressed, Zi's intelligent indexing engine intuitively predicts and displays desired candidates beyond the keys pressed to complete words. Advanced features expand prediction even further to include powerful personalization and learning capabilities - providing prediction of user-created terms and frequently used vocabulary. Now users have easy access to relevant information located on the device and the network.

Qix[™] is a new service discovery engine that provides a quick and easy method for accessing a phone's full set of features, applications and services without having to remember where and how to find them via the traditionally structured menu system.

Content management technology research centres

<p style="text-align: center;">Centre for Pattern Recognition and Machine Intelligence (Concordia University) (CENPARMI)</p>
<p>1455 de Maisonneuve Blvd. West, Suite GM-606, Montréal, Quebec, H3G 1M8</p> <p>Web site: http://www.cenparmi.concordia.ca</p> <p>Contact: Ching Y. Suen</p> <p>Tel.: (514) 848-2424, ext. 7950</p> <p>Email: suen@cenparmi.concordia.ca</p> <p>Number of positions: 18</p>
Research projects
<p>Document Analysis: Document Identification, Information Extraction</p> <p>Bank Cheque and Remittance Slip Processing, Legal Amount Recognition, Courtesy Amount Recognition, Date Recognition</p> <p>Digit Recognition, Neural Network Recognizer, Exploring Features</p> <p>Word Recognition: Preprocessing, French/English, Arabic, Chinese</p> <p>Classifier Combination</p> <p>Script Identification</p> <p>Language Identification: Latin languages, Chinese/Japanese/Korean</p> <p>Symbol Recognition: Road signs, Engineering Drawings, Maps</p>

Centre de recherche informatique de Montréal (CRIM)

Centre de recherche informatique de Montréal

550 Sherbrooke Street West, Suite 100, Montréal, Quebec, H3A 1B9

Tel.: (514) 840-1234 Fax: (514) 840-1244

Web site: <http://www.crim.ca>

Contact: Pierre Dumouchel

Email: Pierre.Dumouchel@crim.ca

Number of positions: 90

Research projects

The CRIM's Voice Recognition team is comprised of a group of speech technology experts who provide a wide range of services in such fields as: text alignment, vocal dictation, large vocabulary, keyword detection and speaker recognition. Its purpose is to constantly improve the performance and robustness of its technology in order to meet the market's needs. The team is interested in application domains such as real-time or delayed-time subtitling for television, film and parliamentary debates, and multimedia indexing.

PROJECTS:

C³GRID (Closed Captioning Computing GRID) project partner

Partially funded by the CANARIE ARIM program, C³GRID's [\[requires English hypertext link\]](#) distributed learning calculation grid for acoustic, visual and language model training in speech recognition.

Automatic Speech Recognition, Automatic Transcription and Universal Accessibility of Parliamentary Debates and Committee Evidence (RAP)

The [RAP \[requires English hypertext link\]](#) project will allow equal access to the deaf or hearing-impaired as well as provide ubiquitous multi-modal access to live Parliamentary content.

Text/Dialog Synchronization for film post-synchronization and dubbing

The purpose of this project is to create and update speech alignment technology and to integrate it into a post-synchronization and dubbing assistance system for the company, Ryshco media.

Partenaire du projet MADIS [\[requires English hypertext link\]](#) (MADIS project partner) (*MPEG-7 Audio-visual Document Indexation System*)

Partially funded by the CANARIE inc. E-content program, the project's objective is to create a framework for indexing and retrieving film content within the MPEG-7 standard. In addition to

the CRIM's Vision and Imaging and Voice Recognition teams, the project's partner is the National Film Board of Canada.

Develop a speech recognition prototype for real-time subtitling of news bulletins and institutional broadcasts.

The purpose of the project is to adapt the CRIM's speech recognition technology to domain-specific subtitling of news bulletins or institutional broadcasts in Québec French for Groupe TVA. As part of this mandate, the RQST (Regroupement québécois pour le sous-titrage) acts as a consultant for Groupe TVA. In this respect, the RQST submits suggestions to this broadcaster, in particular to assess the subtitles generated by the new system, as well as to test the user-friendliness of the system for the deaf and hearing-impaired community.

Bayesian adaptation in speech recognition

Exploratory research oriented towards developing new statistical speech modelling methods. For a given set of speakers, what is the inter-speaker variability? Based on this variability, the marginal variability for each speaker can be derived. This variability may be used to build a Markovian model of the speaker's everyday speech. It should be noted that a speaker's marginal variability is based on data from all the speakers in the group so that the Markovian model differs from the one resulting from the speaker's dependent learning. A suitable solution to our problem gave way to new speaker adaptation methods, which could apply to both speech recognition and automatic speaker identification.

Dalhousie Natural Language Processing Group

6050 University Avenue, Halifax, Nova Scotia, Canada, B3H 1W5

Web site: <http://www.cs.dal.ca/~nlp/>

Contact: Nicholas Cercone

Email: nick@cs.dal.ca

Tel.: (902) 494-2832

Number of positions: 33

Research projects

The Dalhousie Natural Language Processing Group (DNLP) provides information about NLP-related research conducted at the University of Dalhousie, and is a forum for discussion, collaboration, and interaction between researchers interested in NLP-related philosophies, theories, and applications.

The Dalhousie NLP Group formed in May 2003 is the result of combined efforts of both faculty members and graduate students.

Some of the topics the group is interested in are: language modelling, information extraction, information retrieval, question answering, parsing, text mining, data mining, text categorization, document clustering, speech recognition, automatic translation, syntactic and semantic analysis.

**Database Research Group, Department of Computing Science,
University of Alberta**

221 Athabasca Hall, University of Alberta, Edmonton, Alberta, T6G 2E8

Web site: <http://www.cs.ualberta.ca/~database>

Contact: Mario A. Nascimento

Tel.: (780) 492-5678

Email: database@cs.ualberta.ca

Number of positions: 6

Research projects

Topics under investigation by the Database Research Group include database systems, spatiotemporal and image databases, information retrieval, content-based information retrieval, data management issues on the Web, querying and indexing novel data types, knowledge discovery in databases, indexing, data mining, spatial data mining, Web mining, database aspects of multimedia, bioinformatics, logic programming and artificial intelligence.

**Knowledge Acquisition and Machine Learning Research Group,
University of Ottawa**

University of Ottawa, 800 King Edward Avenue, P.O. Box 450, Station "A", Ottawa, Ontario,
K1N 6N5

Web site: <http://www.csi.uottawa.ca/dept/kaml/KAML.html>

Contact: Caroline Barrière

Email: Caroline.barriere@nrc-cnrc.gc.ca

Tel.: (613) 934-3450

Number of positions: 17

Research projects

Learning from Imbalanced Data Sets

Learning in the Absence of Negative Examples

Feature Selection

Soft Clustering

Network Event Correlation

Text Classification

Natural Language Processing -- Machine Translation

Natural Language Processing

Knowledge representation

Knowledge extraction from Text

Corpus linguistics

Computational Lexicography & Terminology

Computer-Assisted Language Learning

Laboratoire d'analyse cognitive de l'information, Équipe lecture et analyse de textes assistée par ordinateur (LANCI)

Laboratoire d'analyse cognitive de l'information,
Université du Québec à Montréal, P.O. Box 8888, Station "A", Montréal, Quebec H3C 3P8
Tel.: (514) 987-3000, ext. 0339
Web site: <http://www.lanci.uqam.ca>
Contact: Jean-Guy Meunier
Email: meunier.jean-guy@uqam.ca
Number of positions: 7

Research projects

Automatic classification and categorization of documents. Thematic analysis of texts.

Laboratoire de recherche sur les Asymétries d'interfaces (LAD)

Linguistic Department, Université du Québec à Montréal, P.O. Box 8888, Station Downtown,
Montréal, Quebec, H3C 3P8

Tel.: (514-987-3000-3519) Fax: (514) 987-0377

Web site: <http://www.interfaceasymmetry.uqam.ca>

Contact: Anne-Marie Di Scullo

Email: di_sciullo.anne-marie@uqam.ca

Number of positions:

Research projects

Project A: Research grant awarded by the Social Sciences and Humanities Research Council (SSHRC) (2004-2008) \$2.5 million

Major Collaborative Research on Interface Asymmetries

The major fundamental challenge of this research is to develop a model of the contact points (or interfaces) between the language faculty and the other cognitive faculties. Besides this major intellectual issue, there is also the issue of developing information technologies that integrate the cognitive interface model. The fundamental challenge is to accommodate the need to deepen our knowledge of the language faculty and its interaction with the other cognitive sub-systems. The technological challenge is to accommodate the necessity of developing parsing systems that are able to process information on an electronic platform more effectively, and therefore be more useful to all, but especially to those who suffer from language disorders.

This research addresses the following critical issues: what are the interface properties that ensure communication between the language faculty and other cognitive sub-systems? How are linguistic expressions semantically and phonetically processed? What psycho and neurolinguistic evidence can justify the cognitive treatment of interface asymmetries? (In this case, asymmetry refers to irreversible relations between two elements of the same set.) How may these be used to improve automatic language processing systems?

Fundamental hypotheses will be checked using empirical data from a wide variety of languages, including the Romance, Germanic, Hellenic, Slavic, Asian, and Algonquian languages. Psycho and neurolinguistic tests will be performed on normal subjects and on subjects with cerebral lesions to ensure the cognitive validity of these hypotheses, which will take the form of algorithms and be incorporated into automatic language processing systems. These systems will have the advantage of being based on human cognitive properties and will therefore perform better than those based on probability calculi. The interaction of these advanced research works and activities will lead to innovative results, which may produce prototypes for automatic language processing. Through industry partnerships, these prototypes will initiate the development of information retrieval and extraction systems, and software adapted to specific language disorders.

Project 2: Research grant awarded by the Fonds Québécois de recherche sur la société et la

culture (FQRSC) (2004-2008) \$500,000

Dynamic interfaces

The **dynamic interface** research program allows for an in-depth structuring and probing of our research problematic in interface asymmetries (MCRI 2004-2008). The purpose of this problematic is to establish the properties that allow the various systems (i.e. language faculty, sensory-motor (SM) system and the conceptual-intentional (CI) system) to interact. It requires cooperative action in fundamental linguistics, neuro and psycholinguistics, and in computational linguistics. It will also allow us to expand our fields of technological application, which were derived from a natural language processing structuring project funded by Valorisation-Recherche Québec (2000-2004).

The first component of our research programming is to establish the formal basic properties that ensure communication between linguistic expressions and their processing by external CI and SM systems. Our research hypothesis states that systems are connected to “minimal asymmetries”. We would like to examine more closely this hypothesis, which has already provided tangible results in three of the targeted research areas. The second component of our research programming relates to optimal communication between the natural language grammar system and external systems and how it increases incrementally by minimal domain. We would like to consider this hypothesis systematically as incremental information processing and determine the role minimal asymmetries play in incremental processing. The purpose of both these hypotheses is to establish the human-based natural language processing properties. The third component of our research programming is to establish how local interactions occur between these systems, which have distinct properties. We suggest considering this problem from a “dynamic parallelism” hypothesis perspective. According to this hypothesis, linguistic derivations happen simultaneously in computational space, and connections between derivations are only possible through minimal asymmetries, which are independent from CI and SM interfaces. We intend to check if the dynamic parallelism hypothesis may be extended to connections between cognitive sub-systems. If that is the case, we would be able to explain the relationship between language, visual attention and movement.

We will continue to validate our theoretical results through experiments that confirm the psycholinguistic reality of dynamic interfaces. The results of our work will contribute to further optimize natural language processing by computational systems. Our model will therefore be independently motivated, and our technology will simulate human-based language processing. The results of our work will further advance morpho-conceptual and morpho-statistical prototypes guided by the recognition of asymmetry relations.

Observatoire de linguistique Sens-Texte (OLST)

Linguistics and Translation Department, Université de Montréal

P.O. Box 6128, Station Downtown, Montréal, Quebec, H3C 3J7

Tel.: (514) 343-2209 Fax: (514) 343-2284

Web site: <http://www.olst.umontreal.ca>

Contact: Alain Polguère

Email: alain.polquere@umontreal.ca

Number of positions: 6 full-time professors + approximately 10 research assistants

Research projects

Explanatory and combinatorial dictionary project

Go to: <http://www.olst.umontreal.ca/deceng.html>

DiCo project: a French-language lexical database of semantic derivations and collocations

Go to: <http://www.olst.umontreal.ca/dicoeng.html>

BDéf project: a French-language database of lexicographic definitions

Go to: <http://www.olst.umontreal.ca/bdefeng.html>

Terminology projects: the ÉCLECTIK Team

Go to: <http://www.olst.umontreal.ca/eclectikeng.html>

Biomedical terminology projects

Go to: <http://www.olst.umontreal.ca/biomedeng.html>

Economic and commercial terminology-translation projects

Go to: <http://www.olst.umontreal.ca/tertradeoeng.html>

Stat-NLP Group (University of Waterloo)

David R. Cheriton School of Computer Science, University of Waterloo, Waterloo, Ontario, Canada, N2L 3G1

Web site: <http://ai.uwaterloo.ca/~stat-nlp/>

Contact: Jessica Miranda

Email: jmiranda@cs.uwaterloo.ca

Tel.: (519) 888-4443

Number of positions: 23

Research projects

The current main interests of the group include: statistical language modeling, information extraction, information retrieval, question answering, parsing, text mining, data mining, text categorization, document clustering, speech recognition.

TRANSLATION

The translation technology industry consists primarily of a wide range of software tools whose purpose is to assist a translator with his/her work or partially replace a translator. These technologies are therefore designed to support the preparation, production and delivery of services in the translation industry. These technologies may consist of translation memories, retrieval tools (corpus extraction and compilation), term banks and terminology management software, or controlled language and automatic translation tools.

In 2002, the Canadian translation industry represented a market worth nearly \$250 million. According to Statistics Canada, it experienced a 43% increase between 1991 and 2001. The development of international trade, the constant expansion of Internet and the increased mobility of the population are all factors that had a direct impact on this increase.

This directory includes detailed descriptions and contact information for fourteen private Canadian companies who are dedicated to the research and development of translation technology products. Also included are the detailed descriptions of four research centres involved in this sector. As for the number of ongoing research projects, translation is the smallest sector in Canada's language technology industry.

Translation technology companies

Aboriginal Languages of Manitoba Inc.
119 Sutherland Avenue, Winnipeg, Manitoba, R2W 3C9 Tel.: (204) 989-6392 Fax.: (204) 989-6396 Toll Free.: 1-866-429-0606 Web site.: http://www.ablang.com Contact.: Carol Beaulieu Email.: alm@shawcable.com Number of positions.: 2
Products and services
Aboriginal Languages of Manitoba Inc. offers services and products for Manitoba's Aboriginal languages: (Cree (Swampy), Dene (Sayisi), Michif, Ojibwe/Saulteaux, Inuktitut, Dakota and Oji-Cree).

BabelFish

Suite 1000, 170 Laurier Avenue West, Ottawa, Ontario, K1P 5V5

Web site: <http://www.babelfish.com>

Tel.: (613) 233-8075 Fax: (613) 233-8589

Contact: Daria Sangiovanni

Products and services

BabelFish offers a full line of multilingual software solutions, including the proprietary BabelFish Technology Platform (Babel-TRACK™) that connects customers with language resources worldwide, giving them a local contact with a global reach.

Beetext

5020 Papineau Street, Montréal, Quebec, H2H 1V8

Tel.: (514) 598-0406

Email: ventes@beetext.com

Products and services

Beetext has established three series of software products designed to simplify the work procedures surrounding a project and those within a project.

The Beetext Flow [\[requires English hypertext link\]](#) project management software reduces wasted time and gives project managers the ability to accomplish critical tasks by implementing optimized work procedures in a centralized work environment.

The Beetext Find [\[Beetext Find - requires English hypertext link\]](#) series of search engines allows individuals working on a project to do a keyword search within half a million documents in their archives and receive results in less than a second, regardless of the language or document format.

Beetext Term [\[requires English hypertext link\]](#) is a complete terminology management solution for translators. Designed for maximum flexibility, this online application optimizes productivity and consistency throughout the translation process while reducing operational costs. Beetext Term can be customized to accommodate the most specific terminology management needs.

BridgeTerm, a division of InfoGraffiti Inc.

1751 Richardson Street, Suite 2504, Montréal, Quebec H3K 1G6

Tel.: (514) 932-7670 Fax: (514) 932-3129

Web site: <http://www.bridgeterm.com>

Contact: Jean-François Richard

Email: jfr@bridgeterm.com

Number of positions: 5

Product research and development

XTracTerm: XTracTerm is a powerful terminology extraction engine that identifies repetitive expressions in a given document. XTracTerm enables terminologists to save time when researching and creating terminology records.

SynchroTerm: SynchroTerm is a powerful terminology extraction tool that allows you to effectively and efficiently extract and create terminology records using translated document pairs, which are commonly known as bitexts. SynchroTerm has a user-friendly interface, with powerful extraction, automatic alignment, search and context verification functions. SynchroTerm was designed to provide the necessary functionality to extract, as quickly as possible, all the available terminology that is contained in your bitexts.

TT&R: TT&R enables translation service coordinators to manage translation requests and follow up on them. When the coordinator receives a document to be translated, s/he creates a translation request in TT&R and then assigns the translation to a translator. TT&R then sends an email to the translator to inform him/her of the location of the file to be translated, the word count and the deadline. It also sends an email to the requestor to confirm the receipt of the document and informs the requestor of his/her request number. Once the translation is completed, the document is assigned to a revisor, to whom TT&R sends an email to inform him/her of the location of the translation to be revised, the word count and the deadline. Once the revision is completed, all the coordinator has to do is click a button and TT&R emails the translation to the requestor. Because of the request number, the coordinator is able to follow up on the request throughout the process.

MT2BT: TM2BT (Translation Memory to bitexts) makes it possible to convert translation memories from SDLX and Trados into HTML bitexts in order to index them using a full-text research tool. This conversion tool allows access, in full-text research mode, to terminology in translation memories without having to use the SDLX and Trados interfaces at each workstation.

Commport Communications International, inc.

3 Ross Street, Aurora, Ontario, L4G 1X3

Tel.: (905) 727-6782 Fax: (905) 727-7251

Web site: <http://www.commport.com/commport/>

Contact: Alison Bartlet

Email: alisonb@commport.com

Products and researches

cyberLiNK is a secure Internet-based universal translation service, protected behind Commport's extensive firewall services and supported by Commport's dedicated professionals.

COMM-Link[®] pro is an EDI translator that is licensed and bundled with full mapping, support, Trading Partner development and VAN services.

Edit inc.

1253 McGill College Avenue, Suite 450, Montréal, Quebec, H3B 2Y5

Tel.: (514) 877-4200 Fax: (514) 877-9890

Web site: <http://www.edit-inc.ca>

Contact: Annette Grimaila

Email: info@edit-inc.com

Number of positions: 13

Products and services

Developer of a line of EDITerm translation assistance software and grammar and educational software.

The core module of EDITerm is a terminological database. EDITerm's primary purpose is to ensure that three types of users have access to consistent terminology: terminologists, who are responsible for language content; unilingual writers, who need to keep productivity high while making efficient use of precise and up-to-date terminology in their own language; and translators, who must produce a faithful version of a text in another language as quickly as possible. What separates EDITerm from other terminological databases is the availability of additional models designed for Term Searching, Assisted Translation and Dissemination of Terminology [These three terms require English hypertext links]. There is no intrinsic limit to the number of possible languages managed with EDITerm except the physical limits of the computer on which the product is installed. The multilingual database, which can include most Western languages, is configured to the needs of each client. If the list of languages required by the client includes Eastern ones, a Unicode version will soon be available.

KCSL INC.

5160 Yonge Street, Suite 1012, Toronto, Ontario, M2N 6L9

Tel.: (416) 222-6112 Fax: (416) 222-6819

Web site: <http://www.kcsl.ca>

Contact: Ilia Kaufman

Email: ilia@kcsl.ca

Number of positions: 15

Research projects and products

Project A: CrossLanguage Information Retrieval (UniFind)

Research of existing technologies and development of new technologies with search and retrieval functionality that allows users to submit a query in the language of their choice, e.g. French, while retrieving the best results selected from databases containing documents written in English, French, Italian, German, etc. The technology and knowledge base employed in the areas of Information Retrieval (IR) and Natural Language Processing (NLP) are rather extensive, as they have been the focus of KCSL's activities for many years.

Project B: Computerized Translation (NoBabel)

Research of existing technologies and development of new technologies to automatically produce high quality draft translations that can subsequently be post-edited by human translators with minimal effort. As with UniFind, the technology and knowledge base employed in the areas of Information Retrieval (IR) and Natural Language Processing (NLP) are rather extensive, as they have been the focus of KCSL's activities for many years.

MultiCorpora R&D Inc.

490 St-Joseph Blvd., Suite 102, Gatineau, Quebec, J8Y3Y7

Tel.: (819) 778-7070 Fax: (819) 778-0801

Web site: <http://www.multicorpora.com>

Contact: Pierre Blais

Email: pblais@multicorpora.ca

Number of positions: 20

Product research and development

Project A: (text corpus management and recycling of previous translations)

Project B: (translation tool for multi-format texts)

Project C: (advanced terminology management)

Project D: (linguistic and advanced statistical algorithm development)

Multilingual E-Data Solutions

66 Aylmer Avenue, Ottawa, Ontario, K1S 2X3

Web site: <http://www.multedata.ca>

Tel.: (613) 730-1106 Fax: (613) 730-7350

Contact: Jim Howse, Managing Partner

Email: jhowse@multedata.ca

Products and services

Inuktitut Sorting Service

Sorting Data Files that use Inuktitut syllabics can be a frustrating, labour-intensive activity, involving extensive cutting and pasting. Multedata's Inuktitut Sort Service provides instant sorting of even the largest files in seconds.

Orca

Web site: <http://www.orcadev.com>

Email: info@orcadev.com

Products and researches

Fusion offers proven, technology-based solutions for the cost-effective translation of written content. Our tools will enable your language specialist(s) to connect directly with peers, customers and business partners allowing more control across your entire translation chain. Fusion™ is used for translation, language management and collaboration. It is a solution that integrates a series of tools providing efficiency, consistency and quality gains to every member of your translation team. With Fusion Translate™, Fusion Collaborate™ and Fusion Server™, your organization will be equipped with the latest translation and collaboration technologies, allowing you to maximize the success of your globalization efforts.

Progiciels BPI

1501 Ducharme Street, Montréal, Quebec, H2V 1G2

Tel.: (514) 276-5382 Fax:

Web site: <http://www.progiciels-bpi.ca>

Contact: Laurent Bourbeau

Email: bourbeau@progiciels-bpi.ca

Products and services

Founded in 1986, Progiciels Bourbeau Pinard Inc. is a Canadian computer services company. Its main sectors of activity are IT and, more specifically, Internet services, computational linguistics, automatic natural language processing, MT and MAT, multilingual textual databases, formal lexicography and electronic dictionaries, typography and digitalized fonts for African languages, and Web site design and maintenance.

The flagship product is a suite of five computer-aided corpus processing (CACP) software packages produced by the Canadian company, *Progiciels BPI*. This suite includes the following software: Alibi, Concorde, Recode, Ventile, and Vocable. These CACP software packages provide automatic text extraction and processing in one of the following languages: Bamana, Ewondo, Fulfude, Linguala, Sango, Yolof, French, German, English, Danish, Spanish, Faroese, Finnish, Dutch, Irish, Icelandic, Italian, Norwegian, Portuguese, and Swedish. For extraction operations, these software programs produce textual statistics (Ventile), vocabulary lists (Vocable), lexicons in alphabetical order (Vocable), context-based word concordance (Concorde), and the bitextual alignment (Alibi) of texts. For recodification operations, the Recode software package supports over 175 character sets. To format files, these software packages are able to directly process texts in full-text, HTML or SGML format.

Roler Data Transfer Services Inc.

1105 Crestlawn Drive, Unit 1 & 2, Mississauga, Ontario, L4W 1A7

Web site: <http://www.roler.com>

Tel.: 1 888 818-8584

Products and researches

Roler's products and services are designed to enable companies of all sizes to better manage those customer touchpoints that depend on documents such as statements, invoices, form letters and collection letters. These products and services are designed to address the most pressing of Customer Relationship Management (CRM) issues without investing in disruptive and expensive packaged software suites. They are flexible, comprehensive and innovative, yet highly reliable. They are designed to be suitable for scaling, yet flexible enough to handle any future changes.

Roler's product and services are grouped as follows:

Document Fulfillment - RolerFLOW Solutions

Our paper-based solutions provide you with enhanced document layout, printing, mailing and archiving options, and take traditional distribution methods to new levels of timeliness and efficiency. RolerFLOW is the mailroom service you've always dreamed of for less than you imagined.

Document Management - RolerVAULT Solutions

Once Roler accepts responsibility for a client's document production, we can also provide a comprehensive range of options for the automatic storage of electronic documents. Whether the documents are stored on our server or that of our client's, Roler will provide the solution appropriate to the use and volume of documents.

Socatra, Société canadienne de traduction assistée inc.

2075 Université Street, Montréal, Quebec, H3A 2L1

Tel.: (514) 848-7066 Fax: (514) 848-7211

Web site: www.socrata.ca

Contact: Pierre Lebrun

Email: socrata@sympatico.ca

Number of positions:

Products and services

Socatra, Société Canadienne de Traduction Assistée (Socatra) Inc. is a Canadian company that was incorporated in 1981 by a group of translators and interpreters whose objective was to computerize the human translation process using artificial intelligence. After more than 20 years of intensive R&D work, the use of fuzzy logic and the availability of better performing material have resulted in the development of the XLT machine translation system.

Services:

- 1 Online real time translation web site
- 2 Terminology or dictionary
- 3 Draft machine translation
- 4 Post-edited draft machine translation
- 5 Final revised translation
- 6 Final revised formatted translation

Terminotix

240 Bank Street, Suite 600, Ottawa, Ontario

Tel.: (613) 233-8465 Fax: (613) 233-3995

Web site: <http://www.terminotix.com>

Contact: Micheline Cloutier

Email: termino@terminotix.com

Products and services

Terminotix Inc. is a company specializing in computer tools for translation. Through the software packages it markets and the services it offers, Terminotix Inc. seeks to provide language professionals with modern, effective tools and work practices.

LogiTerm: An excellent information tool for translators, LogiTerm first suggests research functions that are noteworthy in their simplicity and efficiency. They enable you to simultaneously examine your terminology records, text archives and bitexts. Furthermore, various pre-translation and terminology extraction functions enhance productivity. The performance of the bitext aligner is quite simply outstanding.

LogiTerm Web: Access LogiTerm from wherever you are! Be it at home or at the office, you now have access to the same data to help you with your work via a fast and easy-to-use tool. Any company can easily implement it; and it is compatible with a wide range of computer systems and cost-effective. And you don't even need to install the software at each workstation because LogiTermWeb is accessible from any browser!

LogiTrans: A new kind of information tool, LogiTrans has been designed to answer the question you may often ask yourself when asked to translate a new document: "Don't we have this somewhere already?" LogiTrans makes use of the search engines built into LogiTerm, or works independently. It enables you to get more value from your Bitext and Full-text databases on a scale you never would have imagined. The processing results are presented in a synthesis report format that indicates, from the beginning to the end of the analyzed document, which sections are an exact or similar match to their counterparts in existing documents, and clearly identifies the documents in question.

Fields of research: document management/search engines, pre-translation (for terminology and sentences), repetitive sentences and terminology extraction, text deformatting, document comparison, field analysis, alignment, data conversion.

Translation technology research centres

Centre interdisciplinaire de recherches sur les activités langagières CIRAL

Université Laval, Pavillon Charles-De Koninck, Suite 2253? Languages, Linguistics and Translation Department, Faculty of Arts, Québec, Quebec, Canada, G1K 7P4

Tel.: (418) 656-3744? Fax: (418) 656-7144

Web site: <http://www.ciral.ulaval.ca/accueil.htm>

Contact: Diane Vincent

Email: diane.vincent@lli.ulaval.ca

Number of positions: 20

Research projects

Le Centre interdisciplinaire de recherches sur les activités langagières (CIRAL) encompasses five regular teams, some twenty researchers and around seventy graduate and post-graduate students. They all share the same theory about linguistic issues: language is an integral part of the history and culture of the groups who speak it, and it evolves according to the influence of cross-cultural interactions and socio-cultural pressure. In concrete terms, the CIRAL researchers focus their specific activities on the interpretation of speeches in general and, in particular, speeches concerning language. They are interested in language activities during which identity and image are formed.

ClaC Labs: Computational Linguistics at Concordia

ClaC Laboratories

Department of Computer Science and Software Engineering

Tel.: (514) 848 2424, ext. 3003 Fax: (514) 848 2830

Web site: <http://www.cs.concordia.ca/CLAC/>

Contact: Sabine Bergler and Leila Kosseim

Email: bergler@cs.concordia.ca, kosseim@cs.concordia.ca

Number of Positions: 18

Research Projects

BioKI: BioKI is a literature navigation tool that facilitates the task of finding relevant information in the overwhelmingly large and continuously growing body of biological publications. It allows researchers to quickly access, not only the most relevant articles for a given query, but also the most relevant sub-discussions within an article. Providing a range of different modes to input key phrases of interest, BioKI ranks the articles and also parts of the articles according to the expressed interest, and does so in a format that allows the researcher to quickly assess the context of these high-interest text segments.

Qallo: The Qallo project involves several aspects of Question-Answering: the generation of natural answers to help justify the answer; answering contextual questions in a limited domain and the use of answer formulation for improving answer extraction.

This project is backed by: NSERC and BUL.

Multi-ERSS: Summarization of multiple documents under the umbrella tasks defined by the NIST-sponsored DUC conferences.

Department of Linguistics, Simon Fraser University

Department of Linguistics, Simon Fraser University
8888 University Drive, Burnaby, British Columbia, V5A 1S6
Tel.: (604) 291-5585 Fax: (604) 291-5659
Web site: <http://www.sfu.ca/~mtaboada>
Contact: Maite Taboada
Email: mtaboada@sfu.ca
Number of Positions: 1

Research Projects

Focus and pronominalization in spoken Spanish – For this project, we are analyzing spoken language data (mostly in Spanish) according to a theory of focus in discourse entitled Centring Theory. The aim of this research is to establish rules in the selection of pronouns in discourse (i.e., why a full noun phrase might be chosen over a pronoun to refer to the same entity). Funding: SFU SSHRC Institutional Grant, SFU Discovery Parks Grant, SFU President's Research Grant. Participants: Loreley Hadic Zabala, Mayo Kudo (M.A. students).

Computational analysis of text sentiment – This project addresses the problem of automatically extracting sentiment, or subjective content, from any given text. The objective of the project is, first of all, to establish the best methods and algorithms for extracting sentiment from texts, and second, to implement a system that can perform sentiment classification automatically in a large corpus. Sentiment is defined as subjective content, expressed in whether a text contains positive or negative views and opinions towards its subject matter (e.g., an opinion piece in a newspaper, a movie review, a report on a new product, an e-mail message, or a post on a bulletin board). The hypothesis is that, given a text, we can determine whether it contains subjective material, and if it does, we can determine its positive or negative sentiment by parsing its discourse structure. Funding: Natural Sciences and Engineering Research Council of Canada (NSERC). Participants, present and past: Kim Voll (Ph.D. student), Caroline Anthony (B.Sc. student), Jack Grieve (M.A. student), Dennis Storoshenko (M.A. student), Katia Dilkina (B.Sc. student).

Related project: The Construction of Literary Reputation in Britain: 1900-1950 – The objective of this grant is to develop a pilot project to study the evolution of the literary reputations of two authors (John Galsworthy and D. H. Lawrence). Reputation is assessed based on the automatic extraction of key phrases from the authors' work and from writings concerning the authors. The project will create a database of texts, and computational tools will analyze text content automatically. Funding: Simon Fraser University's Social Sciences and Humanities Research Council Grant. PI: Mary Ann Gillies. Paul McFetridge, Maite Taboada.

Laboratoire RALI

DIRO, Université de Montréal, P.O. Box 6128, Station Downtown, Montréal, Quebec, Canada, H3C 3J7

Tel.: (514) 343-7535 Fax: (514) 343-2496

Web site: <http://rali.iro.umontreal.ca/>

Contact: Elliott Macklovitch

Email: macklovi@iro.umontreal.ca

Number of positions: 9

Research projects

TransType project: The purpose of the *TransType* project is to develop a new kind of interactive tool to assist translators. The translator and the system work together to write the text in the target language; the system contributes what it predicts will be next in the text sequence entered by the translator. The translator may accept these completions as is, modify them, or simply ignore them by continuing to type. After the translator deletes or adds a new character, *TransType* recalculates its predictions, which are based on language and statistical translation models, and tries to suggest a new completion.

TransCheck project: In collaboration with the LTRC, the purpose of this project is to develop a tool that will assist revisors in automatically detecting certain types of translation errors and enforcing specific linguistic standards across a large translation service.

MBOI project: Funded by Nstein Technologies and the NSERC, the purpose of this project is to automatically identify business opportunities for SMEs on the Internet.

Automatic summary generation: The RALI has several projects in this field of research, as it has developed systems that generate summaries for various types of texts (i.e. legal or journalistic texts) and various languages (i.e. Arabic).

Question-answering system: For several years, the RALI has been interested in this field of research in which its objective is to provide, from a textual database, an automatic answer to a factual question. Our system, *Quantum*, participated in the TREC-QA evaluation between 2000 and 2002, and did very well. For the 2003 CLEF competition, we developed a bilingual version of the system that provides answers in one language to questions posed in another language.

SPEECH PROCESSING

Speech processing technologies include software, tools, techniques and applications that reproduce the ability to hear, recognize and produce natural language as spoken by humans. Speech processing may also be improved by natural language processing technology, which imitate a human's ability to understand and process the content of human language, allow sentences voiced in one language to be translated into another, and possess other intelligent linguistic functions.

This document indexes twenty-one private Canadian companies that are dedicated to the research and development of speech processing technological products. This directory includes four research centres that are devoted to the development of this type of technology. Therefore, speech processing is the second most important sector in Canada's language technology industry.

Speech processing technology companies

Adacel
4005 Matte Blvd., Suite E, Brossard, Quebec, J4Y 2P4 Tel.: (450) 444-2687 Fax: (450) 444-4249 Web site: http://www.adacel.com Contact: Michael Asch Email: linda.martel@adacel.com Number of positions:
Products and researches
Adacel develops software applications and services for the air traffic control industry. The company develops speech processing and speech recognition systems.

Apparent Networks

400 - 321 Water Street, Vancouver, British Columbia, V6H 1K5

Tel.: (604) 433-2333 Fax:

Web site: <http://www.apparentnetworks.com>

Contact: Aliston Northey

Email: anorthey@apparentnetworks.com

Products and researches

VoIP specialist, AppareNet Professional Voice assures the network infrastructure is sound before, during and after VoIP deployment, accelerating the VoIP process while using fewer resources. Its VoIP-specific measurements and diagnostics provide a comprehensive view of the converged network, isolating faults that impact voice quality under all call and data traffic loads. Its enhanced reporting makes it easy to demonstrate to customers the overall quality of the network during all testing phases.

Audisoft Technologies

2101 Fernand-Lafontaine Blvd., Longueuil, Quebec, J4G 2J4

Tel.: (450) 646-6334 Fax: (450) 646-4505

Web site: <http://www.audisoft.net>

Contact: Marie Lapalme

Email: marie.lapalme@audisoft.net

Products and services

Audisoft develops computer-related and electronic products for speech recognition and speech processing. AudiSee is a specialized system for students who are oral-deaf or hard of hearing. This revolutionary system allows the simultaneous transmission of audio and video signals in real time. With AudiSee, deaf or hard-of-hearing students have instant access to all useful information. It is therefore easier for them to follow what is going on in the classroom while optimizing their residual hearing. For students, this winning combination significantly increases message comprehension and simplifies learning. Revolutionary for the deaf community, this product facilitates speech-reading, even if the teacher is far away or turns away to write on the blackboard.

Avaaz Innovations

1225 Wonderland Road North, London, Ontario, N6G 2B0

Tel.: (519) 472-7944 Fax: (519) 472-7814

Web site: www.avaaz.com

Contact: Ketan Ramji, Representative

Email: info1@avaaz.com

Number of positions: 5

Products and researches

Avaaz Innovations develops and markets software products for clinical, research, and industrial applications involving speech and spoken language. We are a university spinoff company headquartered in one of North America's leading speech and hearing centres. We offer leading-edge products for both R&D and clinical needs. These products make it possible to analyze, measure and process speech and other acoustic signals; treat childhood articulation and phonological disorders; and assess and treat aphasia and adult language disorders.

BCE Elix

14 Place du Commerce, 5th Floor, Verdun, Quebec, Canada, H3E 1T5

Web site: <http://www.elixonline.ca>

Contact: André Gareau

Tel.: (514) 768-1000 Fax: (514) 768-7680

Email: andre.gareau@bceelix.com

Products and services

Specializing in the development of voice-driven applications, BCE Elix develops business solutions for contact centres.

Computer Telephony Integration: Encompasses an entire industry, focuses on further integrating telephony systems with computer-control devices, as well as an ever-expanding range of applications.

Interactive Voice Response: Provides fast access to data and information while automating routine business and contact centre tasks.

Automated Speech Recognition: A technology that allows users of information systems to speak entries rather than punching numbers on a keypad.

Text-to-speech: A computer-based system that is able to read aloud any text entered in a computer.

VoiceXML: The industry's open standard-based development language for voice-driven solutions. It is endorsed by the W3C, the same organization that defines other key Web standards such as HTML.

Voice over IP: VoIP (Voice over Internet Protocol) telephony is the transfer of speech and signalling information in packets via a data network or the Internet using Internet Protocols. VoIP can be used for communication between two PCs as well as for communication between a traditional telephone and a PC.

Codebaby

#1910, 10004-104th Avenue, Edmonton, Alberta, T5J 0K1

Tel.: (780) 432-5227

Web site: <http://www.codebaby.com>

Email: cb.marketing@codebaby.com

Products and researches

CodeBaby's® virtual agent technology is the culmination of several years of research and development in 3D animation and character design.

CodeBaby Production Studio allows you to design engaging, high quality 3D character-based interactions on your Web site. The CodeBaby content you create with Production Studio can be displayed to the end user through your choice of Macromedia® Flash® player or CodeBaby's own 3D player.

1. E-Learning - A CodeBaby e-Learning agent fosters trust and creates a positive online learning experience, increasing the completion rate of online courses and improving subject matter retention.
2. Online Support - A CodeBaby online support agent can deliver customer support 24 hours a day, and can quickly direct customers to the information they need - saving money in call centre costs.

Computer-Talk

225 East Beaver Creek Road, Richmond Hill, Ontario, L4B 3P4

Tel.: (905) 882-5000 Fax: (905) 882-5501

Web site: <http://www.computer-talk.com>

Contact: Blair Ferguson

Email: bferguson@icescape.com

Products and researches

ice³ unifies multi-channel communication, allowing your contact centre to focus on customer care without worrying about technology distinctions and product integration. Embedded functions in ice³, such as self-service, Web chat interactions, and conversation recording can be activated when they are needed.

Embedded functions:

iceVoice • voice-driven services

iceAgent • agent interaction tool

iceMail • intelligent email management

iceChat • intelligent Web communications

workflow designer • contact centre design and development tool

iceCampaign • customer contact and campaign management

Diaphonics

1310 Hollis Street, Suite 205, Halifax, Nova Scotia, B3J 3P3

Tel.: (902) 446-4959 Fax: (902) 446-3662

Web Site: <http://www.diaphonics.com>

Contact: Jeremy Bernard, Vice-President, Marketing and Business Development

Email: jeremyb@diaphonics.com

Products and researches

Diaphonics' Spike Server is the most complete hardware and software platform for voice security. Businesses and government agencies rely on its biometric voice verification to combat ID fraud, improve customer service and save money.

Excendia

14 Place du Commerce, Suite 200, Nuns' Island, Quebec, H3E 1T5

Web site: <http://www.excendia.com>

Tel.: (514) 765 8484 Fax: (514) 765 8485

Contact: Martin Farah

Products and researches

Excendia is a communications software company. Its flagship product, Excendia, is an Intelligent Business Communications and Customer Interaction Suite. It was specifically developed to help enterprises gain a competitive advantage by lowering operating costs, improving communications efficiency and enhancing customer service. Excendia has been tightly integrated with Microsoft Exchange® and Outlook® to provide Contact Centre and CRM capabilities as well as phone access to Outlook messages (Inbox), appointments (Calendar), and Contacts.

Be it as a hosted solution, an independent server or in conjunction with an existing automatic switch (PBX), Excendia provides the following functions:

- Outlook® par téléphone (Outlook-By-Phone) gives you interactive voice access to Microsoft Outlook from any phone. With Outlook-By-Phone, you have access to your Inbox, including all emails, voice mail and faxes. Outlook-By-Phone can tell you about your meetings and allow you to schedule new ones. Excendia's Outlook gives you real-time access to your to-do list tasks, and your list of contacts so you can call them or email them a voice message.
- Communications d'affaires intelligentes (Intelligent Business Communications) includes the Virtual Assistant, intelligent call routing, SoftPhone for user-friendly call management, multi-party conferences, and several other call centre functions. In addition, for all incoming and outgoing calls, Excendia displays information about the contact directly on the representative's screen, enabling him/her to take notes specific to the communication. All communications are recorded in the user's file as well as in the contact's file.
- Plate-forme de développement ouverte (Open Development Platform) offers an innovative and modular platform to build business communication applications in record time. In particular, it allows retailers and third parties to customize an existing solution or build a new one for a specific niche or client.

McGill Network and Communications Services

845 Sherbrooke St. West, Montréal, Quebec, Canada, H3A 2T5

Web site: <http://www.mcgill.ca/ncs/>

Contact: Louis Richer, Associate Director, Voice Technologies

Tel.: (514) 398-4357

Products and researches

NCS provides campus-wide access to Local Area Networks, the Internet, e-mail, McGill central systems and this very Web site – all from the comfort of your own office, many classrooms and even remotely via modem or high-speed connection. Voice and data communication – NCS pulls it all together for you, offering software packages and site licenses.

NCS Voice Technologies provides telephone and long distance service to McGill departments at both the downtown and Macdonald campuses, as well as the MNIH. Contact your departmental Telephone Coordinator (or [ICS Customer Support](#)) for more information.

McGill NCS also offers REZ Voice and Data Service to students living in McGill Residences and selected MORE buildings.

Nü Echo Inc.

460 Ste-Catherine Street West, Suite 424, Montréal, Quebec, H3B 1A7

Web site: <http://www.nuecho.com>

Tel.: (514) 861-3246 Fax: (514) 861-1676

Contact: Yves Normandin

Email: pr@nuecho.com

Products and researches

Nü Echo speech enabled applications. The company provides a full range of professional services, including turnkey custom development, application tuning and testing, strategic and technical consulting, and training. Nü Echo also provides packaged VoiceXML applications.

Products: Nu Address, Nu Content, Nu Corpus

Nuance Communications, Inc.

75 Queen Street, Montréal, Quebec, H3C 2N6

Tel.: (514) 843-4884, ext. 287 Fax: (514) 843-6872

Web site: <http://www.nuance.com>

Contact: Michael Sabourin

Email: michael.sabourin@nuance.com

Number of positions: 180

Products and researches

Nuance provides speech and imaging solutions for businesses and consumers around the world. Our technologies, applications and services make the user experience more compelling by transforming the way people interact with information and how they create, share and use documents.

OpenSpeech Recognizer: enables businesses to automate and perform highly accurate self-service applications in more than 45 languages. Exceptional densities and built-in flexibility deliver outstanding business results.

RealSpeak: converts text into remarkably high quality speech, with either male and female voices. Whether you want to speech-enable an in-car navigation system, provide a screen reader for the blind or partially sighted, or enhance your call centre service, RealSpeak is the natural solution.

OpenSpeech Dialog: a powerful, intelligent Conversation Manager that accelerates the development of speech applications, and enables for the first time the creation of highly conversational applications.

The VoCon: family of speech recognition systems representing the most widely deployed embedded engines in the world. Nuance delivers VoCon 3200, VoCon SF, VoCon Games, VoCon Mobile and VoCon AEC – each designed to deliver the highest accuracy and most extensive set of features in its class.

Nuance Call Steering enables customers to describe their requests naturally and then to be quickly routed to the correct destination, doing away with confusing touch-tone menus, and multiple phone numbers for different services.

Openface Internet, Inc.

3445 Park Avenue, Montréal, Quebec, H2X 2H6

Tel.: (514) 281-8585 Fax: (514) 281-8982

Web site: <http://www.openface.com>

Contact: Vincent Van Dongen

Email: vincent.vandongen@openface.com

Number of positions: 50

Product researches and development

Openface PBXgate: gateway allowing the addition of VoIP functionalities to a SME's standard PBX.

Openface Hosted PBX: IP-PBX hosted by Openface for SMEs.

Openface CP-PBX: IP-PBX in a SME hosted by Openface.

vChannel: VoIP channel that uses the SIP protocol and provides the same functionalities as PRIs for SME's IP-PBXs.

Pronexus

750 Palladium Drive, Suite 200, Ottawa, Ontario, K2V 1C7

Web site: <http://www.pronexus.com>

Tel.: (613) 271-8989

Contact: Gary Hannah

Products and researches

VBVoice™ is an award-winning Rapid Application Development (RAD) environment for building highly scalable and robust Computer Telephony applications. With its integration into the .NET environment and support for a wide range of communications systems, automatic speech recognition (ASR) and Text-to-Speech (TTS) engines, VBVoice continues to set the standard for telephony and speech development environments the world over.

VBSALT™ is a newly released Rapid Application Development Environment that complements the Microsoft Speech Server. It allows IT Managers, software programmers and call centre developers to rapidly create sophisticated speech-enabled applications. Highlights of VBSALT include a drag-and-drop user interface, encapsulated best practices for voice user interface design and the ability to leverage existing programming skills in languages such as C#, VB.NET etc.

VeoSolutions is a line of speech-enabled turnkey applications based on the Microsoft Speech Server. The product suite includes: VeoMobile™, which provides a voice-enabled interface for business applications such as field force automation and professional services automation; VeoSelf-service™ provides a voice-enabled interface to self-service business applications such as human resources, CRM and scheduling applications.

Speech Gadgets

1466 MacDonald, St-Laurent, Quebec, H4L 2A7

Tel.: (514) 817-9312

Web site: <http://www.speechgadgets.com>

Contact: Ted Hill, CEO

Email: Speechgadgets@videotron.ca

Products and researches

Automatic speech recognition, automatic transcription, and universal accessibility of Parliamentary debates and committee evidence for Canada's House of Commons and Senate.

MPEG-7 Audio-visual Documentation Indexing System (MADIS). MADIS is a packaged prototype for research and development on content-based retrieval of films.

Speech Technology Research Ltd.

1623 McKenzie Avenue, Suite B, Victoria, British Columbia, V8N 1A6

Tel.: (250) 477-0544 Fax: (250)

Web site: www.speechtech.com/

Contact: B. Craig Dickson

Email: products@speechtech.com

Number of positions: 10

Products and researches

STR is an advanced technology company that is dedicated to providing high-quality products and services for speech and signal processing. STR focuses on the development of sophisticated TTS (text-to-speech) technology.

Products:

Star Caster: a text-to-speech system with broadcast-quality output, and integratable IVR functions.

Star Caster Volmet: an automated, continuous in-flight broadcast system for aircraft pilots.

Star Caster Atis: a fully automated ATIS system customizable for an aviation application.

M-ATIS: a compact hardware and software package used to create audio recordings of weather and airport information.

Star Reporter: records, edits and compresses voice messages for email.

Star Lab: an editor for processing voice messages and other audio signals.

CSL: speech and audio processing programs used for capturing and analyzing speech data.

Phonetic Database (PDB): a collection of digitized speech samples from 57 languages on CD-ROM.

Voice Messaging Services: development of customized voice messages in any language, any format, translation services included.

Time ICR

1600 Laperriere Avenue, Suite 102, Ottawa, Ontario, K1Z 8P5

Web site: <http://www.timeicr.com>

Tel.: (613) 798-1505 Fax: (613) 798-1505

Contact: Shafique Shamji

Products and researches

VoiceXML: Automated speech-driven customer care application.

Vestec

145 Columbia Street West, Suite 1, Waterloo, Ontario, N2L 3L2

Web site: <http://www.vestec.com>

Tel.: (519) 885-7615 Fax: (519) 885-9684

Contact: Kashif Kahn, VP, Business Development

Email: kahn@evestech.com

Products and researches

Vestec's solutions utilize three core patent-pending technologies developed over a decade of research at Canada's University of Waterloo: (i) natural speech understanding, (ii) flexible dialogue control, and (iii) automatic grammar generation. Unlike conventional speech recognition, our speech understanding technologies actually comprehend the meaning of spoken utterances as opposed to simply transcribing spoken words. Similarly, our flexible dialog control systems enable users to state their requests in the manner and sequence of their choice in both call-steering as well as self-service applications. Finally, the firm's automatic grammar generation tools drastically reduce application development time via utilization of phoneme combinations to create requisite speech grammar. Needless to say, our core technologies adhere to an open-architecture paradigm and can seamlessly interface with various third-party ASR engines, telephony platforms, and development environments.

VoiceGate Corporation

550 Alden Road, Unit 112, Markham, Ontario, L3R 6A8

Web site: <http://www.voicegatecorp.com>

Tel.: (905) 513-1403 Fax: (905) 479-6999

Contact: Paul Perryman

Research projects and products

Designing, developing and marketing technically-superior PC-based voice mail and interactive voice response systems. System design is targeted at small- to mid-sized installations with emphasis on simple installation, ease of use and long-term reliability.

VoiceGate voice processing products are marketed globally under the trade names VIP4000, VoiceGate "LITE", VoiceGate WAV, VoiceGate ICS, VoiceGate ICS LITE, CallAlert Wireless and VoiceGate NS Gateway through interconnects, wholesale distributors and original equipment manufacturers.

VoiceGenie

1120 Finch Avenue West, 8th Floor, Toronto, Ontario, M3J 3H7

Web site: <http://www.voicegenie.com>

Tel.: (416) 736-0905 Fax: (416) 736-1551

Contact: Stuart Berkowicz

Research projects and products

VoiceGenie offers a flexible, standards-based framework that includes platforms, packaged solutions, custom applications and services. Our solutions help enterprises and telecommunications service providers quickly and easily deliver integrated speech or touch-tone applications to automate customer and employee self-service transactions.

Wavemakers Audio Intelligence

134 Abbott Street, Suite 302, Vancouver, British Columbia, V6B 2K4

Web site: <http://www.wavemakers.com>

Tel.: (604) 639-9990 Fax: (604) 639-0001

Contact: Peter Vandergracht

Research projects and products

Wavemaker's Waveware software optimizes voice-activated automotive and embedded applications. Our solutions work with any speech engine to maximize recognition accuracy in noisy environments by providing echo and noise cancellation for human listening, as well as by reconstructing speech.

Voice processing technology research centres

Signal Processing Oriented Technologies (SPOT) research group

800 King Edward Avenue, Ottawa, Ontario
Tel.: (613) 562-5800, ext. 6315 Fax: (613) 562-5664
Web site: <http://www.site.uottawa.ca/research/spot/>
Contact: Tyseer Aboulnasr, Professor
Email: aboulnas@eng.uottawa.ca
Number of positions: 10-20 graduates

Research projects

Speech enhancement;
Human speech communication and auditory processing;
Speech-based speaker verification;
Speech recognition;
Wideband speech coding;
Audio coding;
Speech packet loss concealment;
Voice activity detection (VAD);

INRS-EMT

800 de la Gauchetière Street West, Suite 6900, Montréal, Quebec, H5A 1K6

Web site: <http://www.emt.inrs.ca/Anglais/index.jsp?page=Home>

Tel.: (514) 875-1266, ext. 2012 Fax: (514) 875-0344

Contact: Douglas O'Shaughnessy Email: dougo@emt.inrs.ca

Research projects

Dedicated to the resolution of major problems in speech recognition and synthesis as well as to the improvement of the performance of computer algorithms for speech-to-text conversion. Part of our work is devoted to the numerical processing of sound signals, our main objective being to improve acquisition, codification and restitution.

Automatic speech recognition by a computer, automatic speech synthesis from a text, speech codification, noisy speech enhancement, and verbal dialogue between humans and computers.

Laboratoire de recherche en multimédia

École de technologie supérieure

1100 Notre-Dame Street West, Montréal, Quebec, H3C 1K3

Tel.: (514) 396-8996 Fax: (514) 396-8405

Web site: <http://labmultimedia.etsmtl.ca/>

Contact: Pierre Dumouchel

Email: Pierre.Dumouchel@etsmtl.ca

Number of positions: 4 professors and several university students

Research projects

The laboratoire multimédia has four researchers who cover various multimedia-related themes: Alain April: multimedia database; Stéphane Coulombe: multimedia code conversion and nomad multimedia; Pierre Dumouchel: speech recognition, speaker recognition; Eric Paquette: computer graphics, image synthesis, scientific visualization.

Projects:

Réseau E-Inclusion: The purpose of the E-Inclusion Research Network is to create powerful audio-video tools that will allow multimedia content producers to improve the richness of the multimedia experience for the blind, deaf, hearing- and visually-impaired persons. The Réseau's objective is to develop audio-visual content processing tools and methods for creating sense-specific content for multimedia producers. The research is grouped into three themes:

1. Interaction et extraction de contenu audio-visuel: (Audio-Visual Content Extraction and Interaction) This theme's objective is to develop software tools for the analysis and automatic extraction of audio-visual content in video documents to facilitate content accessibility for hearing- and visually-impaired persons, and audio-visual data mining in audio-visual archives.
2. Reconnaissance de la parole et du contexte sonore: (Speech and Audio Context Recognition) This theme will use speech and audio context recognition to address the automation of labour-intensive aspects of media production and post-production, such as audio post-synchronization, script correction, captioning, and subtitling.
3. Audiovision interactive et adaptable: (Interactive Adaptable Descriptive Video) The purpose of this theme is to create guidelines for those who produce described movies and television programs, and to gauge the potential usefulness for production, of employing audio description texts of keywords derived in the first two themes.

C³GRID (Closed Captioning Computing GRID) project partner

C³GRID (Closed Captioning Computing GRID) project partner

Partially funded by the CANARIE ARIM program, C³GRID's objective is to develop a distributed learning calculation grid for acoustic, visual and language model training in speech recognition.

National Centre for Audiology

University of Western Ontario

Web site: <http://www.uwo.ca/nca>

Contact: Prudence Allen

Tel: (519) 661-2111, ext. 88944

Email: pallen@uwo.ca

Research projects

The NCA research team is interdisciplinary, including specialists in Audiology, Computer Science, Engineering, Experimental Psychology, Hearing Science and Speech Science. Our major areas of strength are:

- o. Pediatric diagnostics, amplification and rehabilitation;
- o. Adult aural rehabilitation;
- o. Acoustic signal processing;
- o. Speech communication;
- o. Hearing science.

Aural rehabilitation: Adult aural rehabilitation, perceived self-efficacy for managing everyday communication situations, the use of Goal Attainment Scaling in Adult Aural Rehabilitation, barriers and facilitators to the use of assistive technology, determining Aural Rehabilitation readiness.

Child Hearing Research: Developmental psychoacoustics, central auditory processing disorders.

Hearing aids: Electroacoustic analysis and fitting.

Hearing science: Speech perception, sound localization, aging auditory system.f

Spoken language communication: Speech perception and disorders, treatment of spoken language disorders, child aural habilitation, and technically-supported auditory verbal therapy.