MEANWHILE, UP NORTH:  
THE BEGINNINGS OF CALL IN CANADA

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The history of Canadian CALL is typically Canadian: a late start followed by a spurt of creativity tempered by practicality.

CAI evolved in the United States in the sixties. By the time the seventies rolled around, large scale CAI systems were available, one of which (PLATO; see article by Robert S' Hart in this volume) included a second language learning module. At that time, however, we Canadian teachers of second and foreign languages were still thinking of computers in terms of fairly fabulous machines that touched us mainly as appendages of the billing industry. We knew they existed because any of us with outstanding accounts would regularly receive a 3x5 card decorated mostly with hieroglyphics. What was readable to the lay person was a dollar amount and the admonition: "Do not fold, staple or mutilate"—which quickly became legendary in popular culture before dying out along with monster mainframe machines and their keypunch input cards.

We, on the other hand, were preoccupied with the supposed demise of the language lab, and the emerging notions of communicative teaching, which seemed to exclude, a priori, any type of technology except for the occasional audiotape containing snippets of "authentic" speech.
My introduction to CALL came at the 1975 meeting of the International Association of Applied Linguistics (IAAL/AILA) in Montreal. One day, having dutifully marked up my program with ticks next to interesting sounding presentations, I found myself with an hour free; I had to fill that hour somehow lest I be lacking in my professorial duty to extract as much information as possible from the occasion. Searching among the remaining offerings, my eye lit upon a session claiming that CAI was applicable to language learning. Hmph. Using computers to teach language? Well, it was worth a laugh, at least. I set out prepared to scorn if not deride.

Somewhere among my overflowing files there probably still exist my notes from that session. I seriously doubt I will be able to find them before retirement forces me to empty those cupboards, but oddly enough, I retain a vivid mental picture of the room and a memory of an enthusiastic speaker who talked about fill-in-the-blanks exercises and "instant feedback" to the student. I happened to be sitting next to a fellow French teacher, and as the speaker proceeded, we exchanged first notes and then whispered exchanges, which continued after the session, over coffee. Both of us started with wisecracks, and ended intrigued.

The fellow teacher's name was Robert Villeneuve. By the early eighties he had turned himself into a programmer and produced one of Canada's earliest and best CALL programs: EGAPO (Enseignement de la grammaire assisté par ordinateur). The programming language was a homegrown product called CAN-8; the program ran only on minicomputers, those now defunct intermediaries between the old mainframe and the as yet unborn PC. However, minicomputers were much more user friendly than mainframes, resulting in a major improvement in accessibility.

In those days, learning to program was the most likely way of getting anything done in the field. I made a valiant attempt. I returned to my home base (the University of Guelph) and asked the computer specialists for an ID and instructions on how to access the mainframe. About five hours after first sitting down, and managing to log on exactly twice, in both cases being promptly booted off no doubt because of some inadvertent sin on my part, I came to the following conclusions: 1) science students, motivated by the necessity of crunching numbers, might put up with this capriciousness; language students, not to mention language teachers, most certainly
would not; 2) if I could not even manage to logon efficiently, my vague hopes of programming must go the way of unrealistic dreams....

Not that I completely lost interest. A traveling circus promoting the PLATO programs wandered by, and I duly admired touch screens, graphic dogs that jumped over a graphic fence to illustrate the French verb "sauter" and other goodies. What wonderful ease of access! Such good error correction (well...at least the student was told when she made a mistake—immediately!). I inquired about prices. Yet another disillusionment: the university would have to purchase the entire system at a cost of over $2 million just so that I, a lowly language instructor, could play with the thing. A few of the richer institutions, such as the University of Alberta (then flush with oil money) did purchase it, but no language programs were produced. Other commercial authoring systems visited us; all were science oriented and when I asked about things like diacritics and accent marks, I usually got a blank stare. Prices continued to be intimidating.

At this point, I happened to learn by word of mouth of an experiment at the University of Western Ontario that used CAI for vocabulary learning in French. UWO being a mere 90 km down the road, I sped there, and met the person who would eventually become the guardian spirit and initiator of CAI/CALL on the English side of the Canadian divide: Glyn Holmes. The UWO system was crude: accents were represented by existing keystrokes and followed the appropriate vowels. Thus an ë would appear as liberte/. The French department had at its disposition exactly three (recycled) terminals and one printer; at any given time, only one terminal would be functioning properly. But Glyn was enthused, and his enthusiasm revived my own flagging one. He had already convinced a small group of collaborators, including Marilyn Kidd from Huron College, and three teachers from a local school board, to look into something more sophisticated. I promptly included myself in the group, which was later enlarged to include Donna Mydlarski of the University of Calgary.

After much planning, discussion and confusion, for we were all computer illiterate in one way or the other, we designed the program that would eventually become CLEF (Computer Assisted Lessons for French), a program now in use in over 200 institutions in Canada, and more abroad.
Of computers we knew little; of pedagogy we knew much. The design was therefore one that would maximize pedagogy and user friendliness; the first computer people who looked at it just groaned. "You Can't Do That" became a litany we heard over and over. The Ontario Provincial Ministry of Colleges and Universities, however, probably because the officials were as computer illiterate as we were, became entranced by the project and funded us generously for more than the three years normally allowed.

It was then 1979; one of our design specifications called for stand-alone color computers. IBM dominated the field, but had no color; the Apple was at that time still on its creator's drawing boards. We searched, ever hopeful in face of expert discouragement. At one hardware fair, we came across a small machine (64K RAM) called the Compucolor, whose home base was in Georgia. In many ways much ahead of its time, it had a high definition screen, multiple colors and excellent graphics capabilities. We called Georgia, and the Compucolor people were very supportive. A few machines arrived; we hired very young student programmers (not only were they cheap, but they didn't know one Could Not Do That!) and got started.

The Compucolor had its own personality; the programmers swore it had temper as well. From time to time, it would simply suspend operations. To restart it, one could either use brute force or physical pampering. Each machine had one particular spot which, if hit with the flat of the hand and with just the amount of proper emphasis, would produce a wake up call. If that did not work, then we discovered that using a hair dryer to warm up its little insides often did. Programmers both at UWO and Guelph took to including hair dryers for this purpose in the ever more esoteric kitbag of tools they handed on to their successors.

We struggled with design issues: the first few screens we produced had so much use of color that they resembled kaleidoscopes of the most garish kind, making the information difficult to see, much less assimilate. We learned about pacing, and developed ever increasing sophistication in student feedback; some error trapping routines required programming that when printed, took up to ten pages.

Debugging was a constant nightmare. I discovered a knack for that procedure and became highly unpopular with all the programmers who dreaded my never ending lists of bugs to fix, and refix, and re-refix. But at the end of a couple of years, we had
completed ten of the sixty-two lessons planned and a design/programming routine that would make the rest much easier to handle.

In 1981, I made my way to Sweden, to yet another AILA/IAAL conference, ready to show our handiwork. Other members of the CLEF group had traveled to various conferences in the States and Canada, in each case lugging a very hefty Compucolor with them, never sure if the travel would cause a major crisis in its innards or if they would succumb to muscle failure before arrival. But Compucolor/Sweden was most gracious and produced a machine for me to use without any sort of strings. It also worked. My presentation was slotted last in the "Other" grouping of sessions; about ten people turned up. Although they sat politely through the demonstration, only one stayed to talk about implications and expansion. Computers had not yet hit Europe.

Meanwhile, on the home front, CALL was growing by osmosis. Another 1981 conference, this one on the renewal of language laboratory technology, again in Montreal, featured several CALL presentations, including CLEF. By the time Canada was ready for its first all-Canadian CALL conference, in 1989 (Guelph/York), CALL work was being done from coast to coast and interactive videodisc was the new convolution on the horizon.

In contrast to developments in the States, Canadian CALL was pragmatic, modest in its hardware requirements and its ambitions. Perhaps we simply could not afford the latest in hardware; perhaps we thought more in terms of teachers and what hardware was accessible to them. CLEF was ported to the IBM (and clones) when Compucolor went out of business; if someone wrote up a dictation program, it ran with a cheap little cassette recorder next to the computer, not with a voice card. Some efforts came to naught: while Commodore and C-64 computers were popular, we developed a CLEF version for them; the hardware vanished. Ontario opted to back a Mac-like PC quickly dubbed the Bionic Beaver. Many projects were funded for this machine, which the government encouraged all provincial school boards to buy. Unfortunately, the hardware never reached maturity and eventually disappeared; the school boards contrarily bought IBM clones (in Ontario) and Macs (in Quebec).

Other projects ran into funding problems. Some state-of-the-art designs, such as James DeFinney’s creative French composition assistance program, in Moncton, New Brunswick, were shelved unfinished. But many others, funded or not, forged on. There
were no distribution systems; CALL information spread by word of mouth; programs were often given rather than sold to fellow researchers and teachers. Some died a deserved death; others expanded and acquired national stature.

The various projects covered many aspects of CALL: fairly sophisticated drills for specific grammatical problems, writing assistance programs, oral comprehension programs, and interactive videodisc. Pragmatism again encouraged Canadians to develop user-friendly authoring systems: PROMPT (Guelph/Calgary) and CALLGEN (Calgary) did not aim to rival CALIS, for example, but responded to local needs and national language priorities. Quebec went its own way, as usual; it eventually concentrated on grammar checkers. First HUGO, ponderous as it was, but predating most English grammar checkers; then LILAS, whose cost was prohibitive, and finally, representing the current state of the art, le Correcteur 101.

In 1993 a second Canadian CALL conference was held in Victoria, British Columbia. The more than forty sessions covered almost all aspects of current CALL activities and illustrated the impressive spread of CALL both in terms of innovative software and general usage. In addition to refinements of older formats such as drill and practice, researchers presented software and evaluation materials on writing assistance for several languages, aural discrimination, phonology, dictation, authoring systems, interactive videodiscs for K-12 as well as postsecondary levels, and using Computer-Mediated Communications (CMC or Telematics) for language learning.

When looking southward, Canadians feel a certain amount of envy for the sophistication and advanced technology we can see there ... although, of course, we would never be so un-Canadian as to state it openly. Considering ourselves a sort of halfway house between North America and Europe, we also keep a weather eye out for recent developments on the other side of the pond. Europe, after an even later start than Canada, has taken to computers with eagerness: France, with its widespread Minitel facilities which North America can only envy, offers not only CALL but extended CMC applications; England has two journals, several newsletters and several centers dedicated to CALL and telematics. Austria has the reputation of being at the forefront of recent developments. The European community’s drive towards unification seems to have given CALL research an impetus that may well lead to Europe’s challenging the United States for leadership in the field.
What next? Canada is blessed with a large but sparsely populated territory. CMC in its various forms is almost a necessity in such a setting. Various universities are working on using conferencing for language learning (the Guelph-created CoSy system for one); others support LISTSERV discussion groups which group all speakers or students of a language (CAUSERIE out of University Quebec comes to mind as a particular success). It is a new field, and a promising one. From the pedagogical viewpoint, we may be at a stage when true communicative activity can now easily occur, at least in written form: students communicating directly with native speakers of the language they are studying, learning at the same time to master their language skills and being exposed to multiple cultural experiences ... including misunderstandings!

For a small (in population) country, Canada has produced a large number of CALL materials, some of which, such as VI-CONTE (Calgary and Guelph), McBookmaster and RUSSIAN ALIVE (McMaster) have received international recognition. But Canadian modesty will probably continue to prevail, and we will continue to work on specific language learning problems and situations which are first of all pertinent to our own cultural and pedagogical context. We will continue to admire other nations’ work and learn from it, but the software we produce will no doubt be distinctively Canadian in its creativity and practicality.

List of Projects Mentioned in this Article

CALIS
Developed by Duke University in the 1980s (see article by Frank L. Borchardt in this volume). A full-featured authoring system for the teaching of grammar and reading comprehension, now available for multiple language use; can generate graphics. DOS.

CALLGEN
Developed by the University of Calgary. A full-featured authoring system for the teaching of grammar and reading comprehension in most modern Romance and Germanic languages. DOS.

CAUSERIE
One of many Internet lists dedicated to discussion of culture and other language related topics, in this case French. Over 400 members, francophones and francophiles from
fourteen different countries. Internet address: causerie@uquebec.ca (subscription address: listserver@uquebec.ca).

**CLEF (Computer Assisted Lessons for French)**
1985. Developed by the CLEF Group (including authors at the University of Guelph, the University of Calgary, and the London, Ontario, School Board, but based at the primary institution, the University of Western Ontario). Sixty-two lessons in multiple form contextualized drills, some with animated graphics, covering French grammar at the beginning and intermediate levels, includes explanations and extensive feedback to the user; review of errors; hard drive and network versions. DOS.

**COSY**
1982+. Conferencing system originally developed by the University of Guelph in the 1980s for intra-institutional discussion lists. Used as well for teaching in conjunction with regular classes or for distance education. UNIX.

**EGAPO (Enseignement de la grammaire assisté par ordinateur)**
Developed by Robert Villeneuve for Algonquin College (Nepean, Ontario) in 1982; adapted for DOS 1988. A review of French grammar with particular emphasis on verb formation and usage intended for francophones who lack writing skills in French; useful for advanced learners of French as a Second Language. Includes explanations and drills; adapts to individual learners based on their responses to pretests; keeps records of learner progress through the modules. Can be used in "browse" mode, in which the user may jump to any part of the program, or in "course" mode, in which the user must finish each module before going on to the next.

**HUGO**
Originally developed in the 1980s, was taken over by Logidisque of Montreal in 1991. A grammar checker for French. DOS.

**Le Correcteur 101**
Funded by the government of Quebec, first distributed in 1993 by Logidisque of Montreal. A grammar checker for free input with parser-like qualities. DOS and Mac.
LILAs
Conceived as an interactive grammar tutor using free student input as a starting point. DOS.

McBookmaster
1989. An authoring system for the teaching/learning of grammar through drill exercises for multiple European languages, developed at McMaster University (Hamilton, Canada). DOS.

PROMPT
1986. Developed by the University of Calgary and the University of Guelph. An authoring template for creating reading comprehension exercises using full texts, for English, French, German, Spanish, Italian and Latin. Error correction can be automated or customized; student disks containing the passages authored by their teachers may be distributed freely. DOS.

RUSSIAN ALIVE
An interactive videodisc in support of the textbook by the same name, developed at McMaster University. DOS.

VI-CONTE
1989. Developed by the University of Calgary and the University of Guelph, distributed by 3-D Courseware of Calgary and PICS. An interactive videodisc with computer software for associated exercises, based on an Academy Award-winning animated short subject dealing with French culture in Quebec; supplemental materials include a slide based history of Quebec art. DOS.

AUTHOR’S BIODATA
Dana Paramskas has graduate degrees from Georgetown University and Laval University in Applied Linguistics and French Literature. She has been teaching at the University of Guelph, Ontario, since 1969 and holds the rank of Professor of French Studies. Publications on CALL, interactive video and Computer-Mediated Communications. She is co-author of several software programs including CLEF, PROMPT, DICTATE, and VI-CONTE.