

John Chandioux's GramR

By Andrew Joscelyne

GramR is a programming language. GramR is also a product, the work of John Chandioux's NLP software factory in Québec.

GramR—pronounce it à la française as 'gram-air' to get the full savor—started life as a programming language which John Chandioux developed in the framework of Grenoble-style, second generation MT research under Bernard Vauquois. As a Specialized Language for Linguistic Programming, GramR defined the syntax of English for eventual machine implementation. Chandioux took it with him to Montréal, Québec, where he began development of the famed TAUM-METEO English-French automatic weather bulletin translation system in 1976. For Chandioux, the technology breakthrough came via prescient Prolog inventor Alain Colmerauer: "He persuaded me that the future lay in PC platforms, so we refined GramR into a linguistic programming language that was compact and efficient for implementation in the microcomputer environment."

In 1981, Chandioux received a grant for a feasibility-study from the Canadian government, allowing him to demonstrate that MT on a PC was not a pipe dream. As a testbed, he naturally used the nearest system to hand, METEO, then running on a mainframe. So, since 1983, METEO has been working in a purely microcomputer environment, and productivity is rising by the month. The system now processes some fifty thousand words a day (original specs allowed for seven thousand), partly in response to the diminishing lifetime of a weather bulletin: the current goal is to turn a text around in ten minutes, including editing. This effectively reduces processing and transmission time to a virtual blip, the bulk of the operation being taken up with "human" rereading and eventual editing. Chandioux was awarded a new contract in 1991 to update GramR for METEO in order to meet these challenges.

Other GramR-driven systems developed by Chandioux and his team include Général Tao and Digitrad. Général is a translation system put together in October 1990 for turning English insurance contracts for Confederation Life Insurance into French, using a database of pre-existing texts. The system reads English contracts in WordPerfect format and generates a translation in Mac format for post-editing. Using the Général, the limited textual domain and extensive recyclability of the material shrinks what used to be a four-hour job for a human translator to twenty minutes. The client now has total control of the dictionaries and grammars, reducing end-user costs even further.

Digitrad is another turnkey system built for DEC Canada. Again oriented to a narrow-scope/high quantity context, the system takes highly abbreviated product specification entries in a database used for a variety of end uses, such as cataloging, billing, etc., and translates them into French. The system, which has been operational since 1990, has to handle anything up to five thousand updates of its 35,000 entries per week.

GramR Le Détecteur

The inevitable collection of dictionaries, word-lists, and sets of rules written in GramR (French and English) that Chandioux had built up over the years cried out for some further exploitation. In keeping with second generation canons, the linguistic data in GramR is kept separate from the programming, hence accelerating development of parsers for other languages and allowing for more rapid porting to different platforms. In 1990, the Chandioux group released GramR Le Détecteur, a DOS-based grammar checker for French. Microsoft Windows and OS/2 versions of the product followed in September 1991; versions for SCU UNIX and Novell are currently under preparation. There are also plans

for a VAX/VMS version. Macintosh users, however, will have to be content with Chandioux's rival(s) for the time being.

Chandioux is also collaborating with DEC Canada on a direct integration of GramR into DEC's All-In-One office automation environment, at least for the French market. As for the multilingual markets, Chandioux has the technology to develop an English parser and feels there might well be a niche for a GramR product for French speakers writing in English. As for other language markets, he envisages "licensing the technology as a language-independent interface kit so that customers could integrate their grammar into the kit. Given the free exchange treaty due to come into force in North America (Mexico, USA, Canada), a Spanish grammar checker would be a plausible first application."

Standalone vs. integrated

But there are also good reasons to encourage standalone grammar checkers. Since text is used these days in lots of different kinds of applications, built-in checkers are limited in operation to the host application. Chandioux feels that the most flexible solution would be to allow a multi-application checker to handle text from a variety of different sources—a database, a slide presentation program, or any other text-intensive software, thus providing a single customized critique of any text produced.

John Chandioux Experts-Conseil, Inc. 1253 avenue McGill College, bureau 450, Montréal Québec, H3B 2Y5, Canada Tel +1 514 877 4201, Fax +1 514 877 9890