Focus on Human Language Technologies

Report on the Euromap seminar, by Jo Edwards

The future of the information society and its relationship with human language technologies was the key topic for discussion at the EUROMAP - UK National Seminar, held in Cambridge in January. The event was organised by the independent consultancy Equipe Consortium Limited, also based in Cambridge, and was financially supported by the language engineering programme of the European Commission and EUROMAP. EUROMAP is a European-wide survey of the market opportunities for LE, with 15 countries of the European Union (together with Norway and Iceland) looking at the policies, research and development activities, supplier base and especially user potential for language enabled and communication systems in Europe. Equipe Consortium Limited is the UK focal point for research for the EUROMAP project and organised the seminar as part of its scheme of awareness raising activities.

Several areas of human language technologies were represented at the seminar. The morning began by examining the business of language, with Stephen Hagen, Special Advisor to the UK Department of Trade and Industry, taking up the language challenge for business. He presented several of the findings from the Elucidate project, giving the alarming figures for companies that had lost business due to language problems. The type of language problems cited were, inability to communicate effectively, errors in translation and interpreting and lack of cultural affinity. Although Professor Hagen's presentation was somewhat lighthearted with its references to translation errors on menus and signs, it was clear that there is demand for language training and language strategies. These are all areas in which language engineering can help with CD-ROMS, on-line language training, web-based dictionaries and multilingual document managers etc.

Another presentation that aroused great interest was that of Jeremy Peckham of Strategis Consulting, who talked of approaches for taking human language technologies to market. This was of particular interest as several users and potential users of language engineering were participating in the seminar. He talked of the vast improvements in speech recognition, but also gave a word of warning to users - be realistic. His pertinent point was that many users have high expectations of what technology, in particular speech technology, can do for them. The technology appears to under-deliver as the user expects to be able to speak naturally, not realising that simple expressions and structured interaction are needed. These high expectations can cause problems when the technology cannot fulfil the dreams of the user.

Assistive technologies were presented by Diane Whitehouse from the European Commission Disability and Telematics Programme. She provided information on European Commission funded projects and then presented current and emerging technologies for people with disabilities and older adults. One of the projects mentioned was VOICE, which aims to give voice to deaf
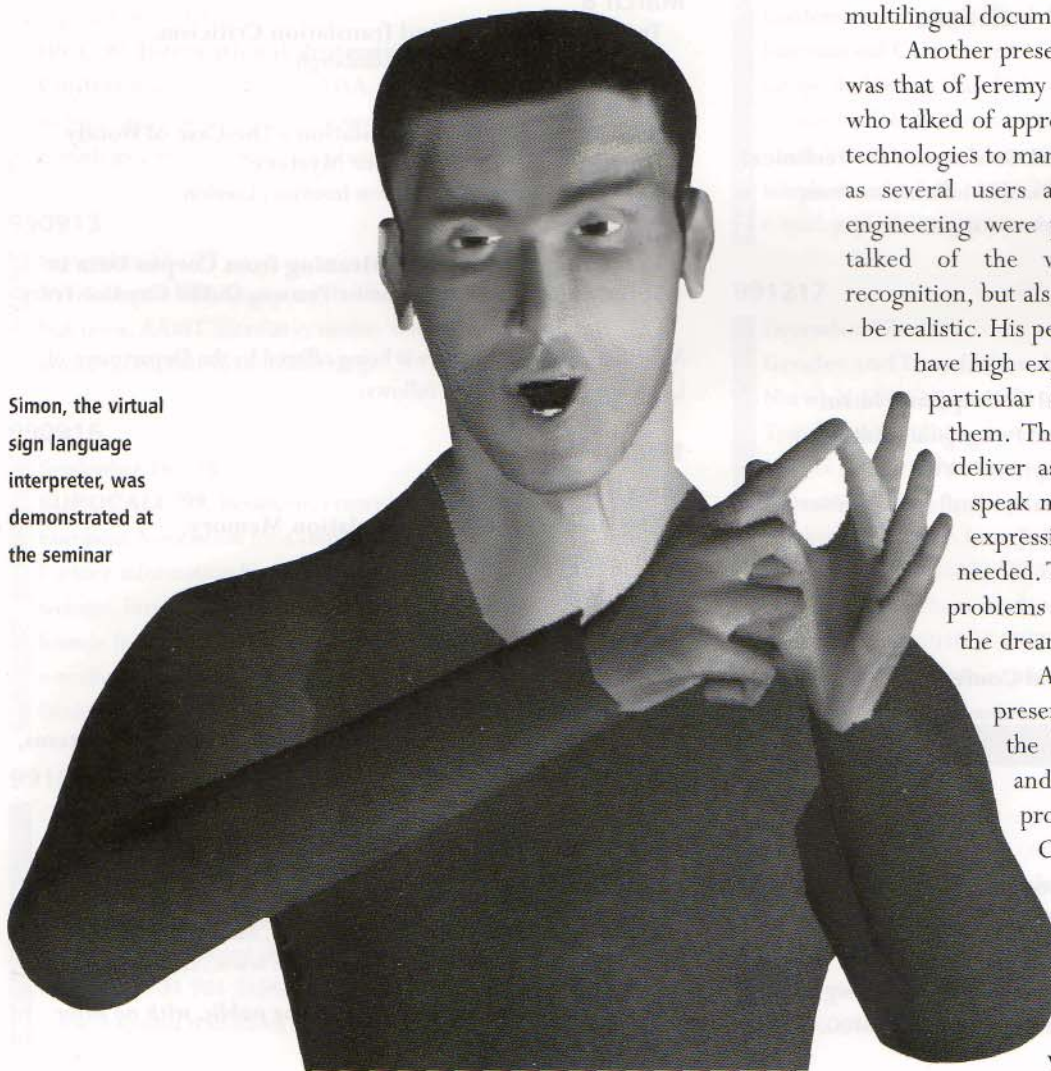
Simon, the virtual sign language interpreter, was demonstrated at the seminar

people, by developing awareness of voice-to-text recognition capabilities. This project has 6 partners and aims to identify user needs for the application of speech-to-text recognition for hearing-impaired people. These are then to be converted into technical specifications. (Visit http: //voice.jrc.it/ for further information)

The seminar also included technology demonstrations from various companies. Mark Wells from Televirtual demonstrated SignAnim, which can effect a linguistic translation of Teletext content into a format suitable for sign language (removing words which are not used in signing). This information is then presented on screen by an animated VR character, who performs the deaf-sign language in real-time, over-laid on the normal TV image. Simon, the virtual human signer, has been developed in response to the demand from many deaf people for an in-vision sign language interpreter.

Other technologies on show were LVM*link,* a solution for managing product documentation, which has been developed by Multilingual Technology Ltd and CSW Informatics in partnership with Chrystal Software. Dawn Murphy demonstrated how the solution integrates authoring and translation tools to allow management of the whole multilingual document lifecycle. SRI International also demonstrated HIGHLIGHT, its information extraction system using natural language processing.

The European Commission was represented by Roberto Cencioni, a head of unit for Directorate General XIII, responsible for directing the Language Engineering R&D Programme. He will also be the official in charge of Human Language Technology within the Fifth Framework Programme ▪

The EUROMAP REPORT
- *Challenge and Opportunity for Europe's Information Society*

To recap, for those who have just skipped the EUROMAP seminar report, the EUROMAP project was established to survey the European scene, gathering information on both a national and European level. This was done to achieve as complete a picture as possible of the situation in Europe with respect to the development and use of language technologies. The report, published at the end of last year, compiles results from the first phase of EUROMAP during 1997 and is part of the Telematics Application Programme.

It is an impressive looking report, with the added bonus of a multilingual CD-ROM which provides 'a world of discovery in the world of language and language technologies'. This is a useful reference tool for those interested in projects conducted under the fourth framework programme or wanting an overview of language technologies. National results were analysed and reviewed from a European perspective to produce the report about the state of language engineering in Europe. The report covers the essence of the survey and analysis, a digest of national profiles and recommendations for the future.

The report discusses the main Language Engineering areas being worked on by the 17 countries involved in the project, noting particular growth areas. The national profiles give a taste of the outlook for language engineering in each country, whether their policies are successful, the main application areas and how useful the links between research institutions and industry are proving to be. For example, in the UK, the links with industry are patchy, with the exception of the R&D sites actually owned by industry. Also, despite the increasing need for multilingual language technology tools, the majority (60%) of the UK language technologies R&D projects surveyed are in English with 11% in French and only 8% in German. Unfortunately the profiles have not been written comparably and so one cannot compare language usage in all the countries, but they do provide a valuable overview of which areas are being focused upon in each country.

Also of interest in the report, is the section on key findings and recommendations. The report advises that the European Union should establish a non-technical advisory group on European languages in the digital economy, to monitor the risks and opportunities for European business in the global market. The report also states that there is little evidence of national support for innovative programmes or development for health and welfare services, which could carry language technologies. This is one of the gaps with a potential for language engineering.

The second phase of EUROMAP is now underway and the network of national focal points in each participating country are hoping to encourage collaboration, pave the way towards better coordination of national and European R&D policies, and raise awareness. This EUROMAP network is to carry out a range of awareness activities to inform market players of the progress and potential of language technologies in their own countries and all across Europe.

For further information on EUROMAP or the EUROMAP Report visit http://www.linglink.lu ▪