EUROMAP
LANGUAGE TECHNOLOGIES

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Abstract

The Austrian Bureau for International Research and Technology Cooperation (BIT) would like to give a presentation on it`s engagement as a partner of the EUROMAP project.

Established in 1996, EUROMAP is a European Commission supported initiative dedicated to promoting greater awareness and faster take-up of Human Language Technologies within Europe. It acts as a central resource and marketing support unit providing information to all communities involved in Human Language Technolgies from researchers and developers to suppliers and users. It`s aim is to create communities of interest on a national and cross-border basis.

1. EUROMAP

EUROMAP is present in twelve European nations through the following National Focus Points which are responsible for promoting language technology awareness in their countries.

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FINLAND
CSC-Scientific Computing LTD
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FRANCE
ELDA-European Language Resources Distribution Agency
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GERMANY
VDI/VDE-Technologiezentrum Informationstechnik GmbH
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Among the services provided by EUROMAP Language Technologies:

- a full range of information on the language technology community, from R&D to policy makers and suppliers
- information dissemination: language technology initiatives, (EU supported) research programmes and successful implementation case studies
- industrie workshop and seminars
- production and dissemination of white papers and best practice reports
- compilation and frequent updating of key industry contact databases
- communication networks to help bring together researchers, developers, suppliers and users who wish to cooperate in European projects

is the flagship website dedicated to providing the latest news and developments in the world of Human Language Technologies. It forms a valuable knowledge database, constantly informing government, industry, suppliers and users.

In addition to daily news, the site features:

- documents, articles, reports and research for the sector
- case study of Human Language Technologies in action across different business sectors
- details and listings of industry seminars, workshops and general events
- registration for industry contact database
- information on research initiatives and EU calls

HLTCentral.org is the leading online information resource for the HLT community. The website is published and jointly funded by EUROMAP Language Technologies and ELSNET, both EU supported projects.

Furthermore EUROMAP publishes a free monthly electronic newsletter, headlining the latest developments in the field from Europe (and beyond) over the previous month, and keeping you abreast of upcoming events, EU calls and other useful information.

Already, the use of Human Language Technologies is adding enormous value and efficiency to many European businesses.

BIT would like to give an insight into examples of sucessful implemantation of HLT technology:

The use of online tools for the travel industry has exploded in recent years with e-travel at the forefront of e-commerce. It is estimated that nearly 25% of Europeans will book holiday online during 2002. In addition to boosting business opportunities, Human Language Technologies can assist travellers abroad with an assortment of customer-friendly applications:

- website translation tools: *Mietta* searches and translates local tourism materials for travellers
- speech driven reservation systems: *JetAir* allows callers to interact vocally with their database to check price/availability and make bookings and cancellations.
- Information terminals: Italy`s State Railway offers such a service.

The future of this industry is indeed exciting: from virtual travel agents to multilingual reservation systems that directly translate conversations between users employing different languages.

With the rise of the multilingual web, the need for instantaneous document translation has exploded. Consumers require fast access to webpage in other languages, and businesses must localise their e-commerce and other sites to address a global marketplace of partners and customers. Effective new applications include:

- automatic translation buttons on websites: *PriceWaterhouseCoopers* has been using Systran to help it`s consultants access global content over their intranet.
- online electronic dictionaries for rapid word understanding: *Xerox* has developed software that provides click-on dictionary support to foreign language readers.
- Language-sensitive search engines: norwegian-developed FAST can handle searches in 46 languages.

New mobile services offer unprecedented opportunities for combining high quality speech recognition and synthesis to deliver information in the right language to users anywhere. Customer support call centres in areas as diverse as insurance, software and travel all can benefit from language technologies to filter and sort voice and email messages to optimise processing.

- speech recognition: France Telecom Mobile offers Itineris subscribers a range of information services selected by voice commands.
- automated telephone directories: CNET employs a voice directory providing employee telephone numbers and connection through spoken name.
- Multilingual email content readers: "Dial & Play", an email platform converts inbox messages to speech in the users´preferred language.

Banks must maintain close contact with customers, while financial analysts need to pinpoint right information fast. New speech technologies can boost the power of telephone-based services for account holders, and advanced search, summarising and filtering techniques can deliver on-demand knowledge to key decision makers.

- speech interfaces: German based *Advance Bank* uses a fully voice-enabled speech recognition system in their brokerage service to offer self service functionality.
- Cross-lingual search engines: Germany`s *TexTec`s CANAL* software is used for searching a number of research library applications.
- Text summarisation systems: France`s *LexiQuest* helps companies manage their knowledge with a complete set of linguistic technologies.

2. BIT-The Austrian National Contact Point

BIT has asked the journalist Fenkart-Fröschel to write an article on the Austrian HLT situation, it´s strenghts and weaknesses. It is based on interviews given by the major key players of the Austrian HLT sector. Back to the origins of Austrian HLT up to 1995, the year of downsizing, the recent past and future developments- the article gives an overview and first insight.

BIT is the leader of the EUROMAP Tourism Task Force. (All in whole there are three task forces. Besides the tourism task force one task force deals with e-commerce, another with call center applications). A dissertation about tourism and HLT was written on behalf of BIT by Harald Jedlicka, a student at the univerisity of economics Vienna.

The Final Tourism Report " Travelling the last kilometre to the costomer-opportunities and obstacles for human language technology solutions in tourism sector" published by BIT gives an insight into effective HLT technology solutions. Furthermore recent EC Projects involving HLT and the Travel & Tourism sector like *CATCH 2004, M-PIRO, MIETTA, NESPOLE, ARCHEOGUIDE, SPOTLIGHT, ARISE, FITISH, InTouriSME and TourIST* are described.

But not only the tourism sector has been well analysed – 4 Austrian Case Studies show the successful implementation of HLT in various fields:

- HLT for the telephone exchange at the Telekom Austria Group
  The Voice Navigator of Sonorys Technology is a voice controlled, automated telephone exchange system, compatible to the existing telephone system with extensions. The caller is guided through the system on a voice based technology to be connected to the wanted person. The Voice Navigator is supporting the existing telephone exchange system to free bound resources and bring the workload of in-house calls to zero. The caller just has to state the name of the wanted speaking partner to be connected to this person. There is no need of remembering extension-numbers any more. The Telekom Austria is forecasting a reduction of workload for the existing telephone exchang by more than 30% and an user acceptance of about 80%.

- The "Alberto Vilar Title delivery system" at the Vienna opera
  This title delivery system provides subtitles to the running opera in two German and English to the visitor. The system is produced by "Figaro Systems Inc" located in Santa Fee.You can follow the translation on the screen on the seat in front of you. The Vienna State Opera is the first opera worlwide providing such a system in two different languages. As third language Japanese is in preperation. As every performance differs a little bit a human translator is integrated who assures the exact translation.

- Natural Speech Recognition at the Kaiser Franz Josef Hospital, Vienna
  Around 75.000 reoprts per year are produced in the department of radiology of the Kaiser Franz Josef Hospital. Traditionally reports had to be dictated by the responsible doctor, typed by a secretary and corrected by the doctor again. Problems occured in shifts with no secretarial staff available like weekends and nights. Now radiologists dictate their reports into Philips SpeechMike microphone which is connected to a Windows NT workstation. With the help of a sofware tool the sound card settings can be adjusted to the habits of the different speakers and different levels of background noise. The speech recognition server converts the resulting sound file into text. The very hight recognition rate is achieved with the help of an approximately 300.000 words background lexicon and a professional context with 64.000 entries, containing in addition to everyday words all

important radiological terms. The text is displayed on the screen and can be treated like any normal text document. The average turnaround time of reports decreased from 13 to 8 hours.

- VoiceButler of Mobilkom Austria AG
  The VoiceButler was the first big public text-to-speech service in mobile communication and an early convergent product in the areas internet and language. Being world-wide the first mobile phone company going public with such a service was helping to keep up the image of Mobilkom Austria AG as the leading mobile communications company in innovation and technology in Austria.
  The HLT solution of AirCall Multimedia made it possible not only to check ones mailbox by listening to the emails via mobile phone (text to speech) but also to reply to emails by mobile phone (reply with a Wav file of the recorded speech) and to book SMS information services. The resulting product was the VoiceButler. The user has his/her own mail address, consisting of his mobile phone number and the domain name. When the user receives a new mail, a SMS message will be sent, containing the name of the sender, subject and the first 140 signs of th mail. When the user dials the VoiceButler number s/he can listen to the mails.

BIT has meanwhile a contacts database available with some hundreds of persons interested in HLT. They are regularly informed about developments and events like the LangTech 2002, an HLT conference that will take place in Berlin in September 2002.

EUROMAP aims at collecting cross-border contacts for setting up a network of key players in the field of HLT. Every EUROMAP member has got a "partner country", in case of Austria it`s Slovenia. At the last consortium meeting which took place in Berlin all partners were invited. Dr. Jerneja Gros, Director R&D of Masterpoint gave valuable information on the status of HLT in Slovenia. A fact file about Slovenia was set up, covering the most important Slovenian institutions dealing with HLT. The fact files on all countries will be integrated into the final EUROMAP report which will be published on the HLTCentral website.

Furthermore a dissertation on the Slovenian Information Society in general and the use of HLT in particular is written for BIT by the Slovenian student at the Vieneese university of economics, Sergej Murnik. The first part of his thesis is already finished, the second part will be available in fall.

BIT has organised many events and workshops in order to raise awareness for HLT and the possibilities of the EU Framework Programs.

The dissemination of information on the EUROMAP project and it`s outcomes is one of the major tasks of the National Contact Points. Therefore the participation at the Third Language Technologies Conference in Ljubljana would be a welcome possibility for BIT to make EUROMAP more popular and to strenghten the already existing contacts to Slovenia.