



Vision Group
Media and Information Services
Preliminary Findings

META=VISION

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About the Speaker

- ❑ Philippe Wacker is Executive Director of EMF, the Forum of e-Excellence www.emfs.eu
- ❑ EMF is the European cross-stakeholders' network promoting excellence in the digital economy. Around the core group of winners of the European Seal of e-Excellence, EMF gathers a broad group of stakeholders in the digital economy: associations and clusters, large companies, research organisations, public entities, investors, individual advisors, etc.
- ❑ EMF members are the drivers of the digital economy. Their success is based on a careful blending of innovation and market needs!

The Vision Group

Media and Information Services



- **Fields:** audiovisual sector, news services, digital libraries, portals and vortals, search engines, social networks etc.
- **Stakeholders:** audiovisual and media industries, web and search engine providers, archives, etc.
- **Technologies:** speech processing, subtitling, text simplification, media mining, multilingual data processing, topic identification, content classification and structuring, information extraction, summarisation, multidimensional analytics, authoring, LT-enabled digitisation, mono/ multilingual/ multimedia search, semantic search, unregulated language and discourse processing , etc.
- **Organizers**
 - Stelios Piperidis (ILSP, Greece)
 - Margaretha Mazura (EMF, Belgium)
- **Meetings**
 1. Paris, 10 September 2010
 2. Barcelona, 15 October 2010

The Vision Group

Media and Information Services

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- ❑ Goals:
 - Focus on LT enabled Media and Information Services
 - Language & content processing technologies as communication & information facilitators
 - requirements that Media and Information related sectors have from LT and the role LT will play.
- ❑ A clear view on LT in Media and Information Services will:
 - highlight their importance in a sector which is becoming more and more important from a financial point of view,
 - trigger financial and strategic support (by the EC and the EP, among others), to give Europe the chance of becoming *the* global player.



Elements of a Vision Statement

Premises

- ❑ Media and information services are highly language dependent in a multilingual Europe (63 languages!)
- ❑ Millions of hours of archives have been accumulated and are being conserved at high cost – these constitute a gigantic information and knowledge resource
- ❑ A multi-polar world implies that no single language will be dominant – more and more content is produced in different languages (e.g. Chinese, Korean, Russian)
- ❑ Most European media and information service providers remain monolingual or face substantial hurdles in developing truly multilingual strategies
- ❑ The pool of qualified (multi)linguists is shrinking while the e-skills gap is broadening
- ❑ Access to (relevant) information and knowledge remains (often) conditional on translation
- ❑ The potential of language technologies remains largely untapped

Vision statement

- ❑ A sustained investment in R+D+I in language technologies will leverage European media and information services and contribute to creating millions of new jobs
- ❑ The systematic build-up and reinforcement of the European language technology industry by a well-targeted deployment of leading edge R&D capabilities throughout the various specific product, service and process value-chains will truly empower the emergence of a multilingual content and service economy, generate societal benefits, engender export opportunities, etc.
- ❑ The European institutions are uniquely placed to spearhead this opportunity as the Member States remain mostly concerned with the promotion of their respective national languages
- ❑ Language technologies are an essential cornerstone of the knowledge economy



Domain specific Visions

I need to know...

- ❑ European citizens need to accurately know about X : <who, what, where, when, why, what others say about X, ...>
- ❑ Information overload handling and Social stream mining
 - An efficient way of exploiting millions of available knowledge bases, social & real time streams is required.
- ❑ Life logging
 - Gather information on a massive scale and exploit it when someone is looking for something
 - Technologies able to gather all concepts & associated content and/or knowledge related to every discipline need to be implemented

Improved information navigation and presentation

- ❑ Quality, coverage and robustness of text mining technologies, further exploited in search and in information navigation and presentation
 - Robust, wide coverage language analysis (parsing, etc) in all community languages should be pursued.
- ❑ Genre-aware LT applications
 - Able to react and behave in a way that is best suited to a given communication situation.
 - Research advances needed in formalizing and incorporating text type knowledge in LT applications.
- ❑ Semantic Annotation
 - Extend research from sentences to discourses, from documents to dialogues, from artificial to natural interaction.
 - Include multimodal, multifunctional, interpersonal communication, and cross-modal interaction to facilitate accessibility.

Intelligent media channels speaking our language

- ❑ Federated Audiovisual Search
 - Provide intelligent answers to everyday's questions.
 - Innovative technologies in intelligent ways of recognizing and identifying objects, persons and actions are required.
- ❑ Multimedia multilingual subtitling
 - Foster the access to information for ethnic minorities and facilitate information exchange between EU countries.
- ❑ Deliver more efficient online advertising

- ❑ Personalized task-centered interactive information assistants
 - Know or adapt to: what the user knows or has already asked for, the user's language, education and level of expertise.
 - Richer understanding of information seeking should be a priority.
- ❑ Robust speech-enabled executive assistants
 - Automatic minutes production from meetings, automatic indexing for voice search, speech transcription and translation for videos.
 - Research advances in Speech Recognition, transcription and synthesis should be pursued.
- ❑ Voice Control instead of traditional GUIs
 - Simpler in use, provide trustful services .
 - Need to upgrade old-fashioned, complex-to-use GUIs with new functionalities



Domain specific Needs

Demand and Observations

- ❑ Capture of web content [a collection of everything, text, images, videos etc., like archive.org] at a European level
- ❑ Improvement of speech technologies
- ❑ Advances in Audiovisual Search
- ❑ Deeper understanding of text content
- ❑ Large-scale text modelling
- ❑ Genre and text-type based layers in language analysis and generation.
- ❑ Dialogue and Interaction modelling

In a Nutshell: Topics with Visionary Potential

- ❑ Domain specific
 - Information agents
 - Enabling citizens to know accurately and instantly
 - Improved information navigation and presentation
 - Intelligent language aware media channels and related services
 - Personal information assistants

- ❑ Domain independent (not discussed in this short presentation)
 - Eliminate language barriers for consumers and SMEs.
 - Promote the Language Resources ecosystem.
 - Adopt a common infrastructure to ensure interoperability.
 - Cost-effective porting of LT services and solutions across domains.
 - Enable rapid progress in basic technology for semantic annotation and search.
 - Develop synergies among industry and academia.