



PASCAL2

Pattern Analysis, Statistical Modelling and
Computational Learning

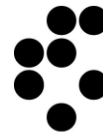
Machine Learning for Multimodal Interaction

MLMI Thematic Programme

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March 2012

Objective and main application

Objective: to explore the opportunities and challenges entailed by adapting conventional techniques to multimodal interactive systems.

Main application: VideoLectures.NET

We need tools to enable location, access and repackaging of the component videos in order to give users the most appropriate material in a staged and accessible fashion.

MLMI origin and duration

Mar 2010: proposed but delayed awaiting expansion of its scope.

Sep 2010: focus on VideoLectures, to help in creating a lasting legacy for PASCAL2 and building a resource for K4A.

Mar 2011: presented.

May 2011: officially started.

Duration: two final years of PASCAL2.

Events: ICMI 2011 (Nov 2011)

ICMI: Int. Conf. on Multimodal Interaction.

Fusion of the "International Conference on Multimodal Interfaces (former ICMI)" and the "Workshop on Machine Learning for Multimodal Interaction (MLMI)".

Over the (ICMI/MLMI) historical series, ICMI-2011 achieved the highest registration rate ever.

Events: IASD challenge (Spring 2012)

IASD: Interactive annotation of sequential data.

Objective: to explore cost-effective solutions for producing accurate transcriptions of video lectures and speech-like sequential data.

Focus on the study of **intelligent techniques to interact with users** and obtain accurate enough results with minimal user supervision error.

Events: 'La Vie' harvest (Summer 2012)

Motivation: VideoLectures.NET users have difficulties in identifying the best video for their needs among the vast range of possibilities afforded by the site.

Objective: to develop a proof-of-concept system that would provide users with advice on suitable videos for their needs.

Events: ICMI 2012 Grand Challenges (Autumn 2012)

Objective: to create new collaborative efforts towards advancing multimodal technologies through common tasks and standard datasets.

4 challenges: audio-visual emotion recognition, haptic voice interaction, brain-computer interfaces and multimodal resources annotation.

Link to MLMI: challenge proposal for partial travel support for the top challenge contributors and for a cash prize.

Other events

Environmental intelligence challenge

ICGI 2012 conference

Core workshop on challenges

...

Special “event”: transLectures

Mar 2010: first discussion with Mitja about transcribing and translating VideoLectures.NET.

May 2010: a STREP proposal will be prepared.

Jan 2011: proposal submitted.

Apr 2011: invited to negotiations.

Nov 2011: officially started.

Duration: 3 years.

transLectures objectives

Our aim is to develop innovative, cost-effective solutions to produce accurate transcriptions and translations in VideoLectures.NET, with generality across other Matterhorn-related repositories.

Three scientific and technological objectives:

1. Improvement of transcription and translation quality by **massive adaptation**.
2. Improvement of transcription and translation quality by **intelligent interaction**.
3. **Integration into Matterhorn** to enable real-life evaluation.

transLectures participants

No	Name	Short name	Country	Exit Month	Exit month
1	UNIVERSITAT POLITECNICA DE VALENCIA	UPV	Spain	1	36
2	XEROX SAS	XEROX	France	1	36
3	INSTITUT JOZEF STEFAN	JSI	Slovenia	1	36
3+	KNOWLEDGE FOR ALL FOUNDATION	K4A	UK	1	36
4	RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN	RWTH	Germany	1	36
5	EUROPEAN MEDIA LABORATORY GMBH	EML	Germany	1	36
6	Deluxe Digital Studios Ltd	DDS	UK	1	36

transLectures: basic data statistics (May 2012)

Repository	LG	Total		Transcribed		Translated				
		#lectures	#hours	#lectures	#hours	EN	ES	FR	DE	SL
poliMedia	ES	7017	1363	733	119					
VL.NET	EN	9720	7290	138	70		12	16	16	8
	SL	1103	827	42	35	35				
	ES	5056	758	9	1					

October 2012 meeting: Opencast-Matterhorn, transLectures, K4A and PASCAL2

1. To promote transLectures on a large scale within the US/EU Matterhorn and OCWC communities.
2. To make a bonding meeting with both K4A/Matterhorn/PASCAL2 boards of directors, discuss cross research, distant learning, education cooperation, etc.
3. To prepare a hands on workshop for PASCAL2 partners to adopt the Matterhorn+transLectures technology.