

The LIG Arabic / English Speech Translation System at IWSLT08

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1. Overview of the IWSLT07 system (1/2)

- Second participation to IWSLT
 - A/E task
 - Conventional phrase-based system using Moses+ Giza+ sri-lm
- Use of IWSLT-provided data only except
 - A 84k A/E bilingual dictionary taken from <http://freedict.cvs.sourceforge.net/freedict/eng-ara/>
 - Different morphological analyzers
 - LDC's Gigaword corpus (for english LM training)
- Use of ASR lattices
 - See « The LIG Arabic / English Speech Translation System à IWSLT07 » **L. Besacier & al.** IWSLT07. Trento. Italy. October 2007.

1. Overview of the IWSLT07 system (2/2)

- 2007 System performance (BLEU)

	dev06	tst06	tst06 (asr)	tst07	tst07 (asr)
Sys. 2007	0.2948	0.2271	0.2253	0.4263	0.3904

2. Improvements made in 2008 (1/2)

- Drop unknown words
 - + 2 points BLEU
- MBR decoding
 - improvements on tst06 and tst07 but not on dev06
- Improved repunctuation system
- Lexicalized re-ordering models
 - Tests not conclusive (not used for the IWSLT08 submission)

2. Improvements made in 2008 (2/2)

	dev06	tst06	tst06 (asr)	tst07	tst07 (asr)
Sys. 2007	0.2948	0.2271	0.2253	0.4263	0.3904
+drop- unknown	0.3139	0.2442		0.4554	
+mbr	0.3083	0.2446		0.4569	
+new repunct	0.3134	0.2514	0.2290	0.4775	0.4194
+lex. reordering	0.3206	0.2573	0.2302	0.4688	0.4125

3. Official IWSLT08 results

	$(\text{bleu} + \text{meteor}) / 2$	bleu	meteor
verbatim	0.5674	0.4595	0.6752
ASR	0.5022	0.3931	0.6113

This year, the systems were ranked according to the $(\text{BLEU} + \text{METEOR}) / 2$ score of the primary ASR output run submissions. The LIG was ranked 5th/10 based on this rule.

4. Post-evaluation experiments (1/2)

- Comparison and combination of the different Arabic segmentation methods (Buckwalter and SVM-POS).

	dev06	tst06	tst07
Buckwalter	0.3134	0.2514	0.4775
SVM-POS	0.2757	0.2267	0.4944
Combination (post-edition)			0.5191

4. Post-evaluation experiments (2/2)

	Seg. buckwalter	Seg. SVM-POS
1	ما مقاسك what size do you wear	ما مقاسك what your size
2	سيستغرق ذلك حوالي ثلاثون دقيقة it will take that thirty minutes	سيستغرق ذلك حوالي ثلاثون دقيقة it will take about thirty minutes
3	أيمكنني استعمال هاتفك can i use your telephone	أيمكنني استعمال هاتفك can i your phone
4	عندي حمى منذ البارحة i have a fever since	عندي حمى منذ البارحة i have a fever since yesterday
5	هل يمكنني التحدث إلى السيد كارتر can i talk to mr	هل يمكنني التحدث إلى السيد كارتر may i speak to mr carter
6	صدمتني سيارة i was hit by a car	صدمتني سيارة was hit by a car
7	عندي ألم في أذن i have a pain in my ear	عندي ألم في الأذن i have a pain in turn

Qualitative comparison of the two Arabic segmentation methods (correct translations are put in bold)